The Architectural

FORUM

Magazine of Building

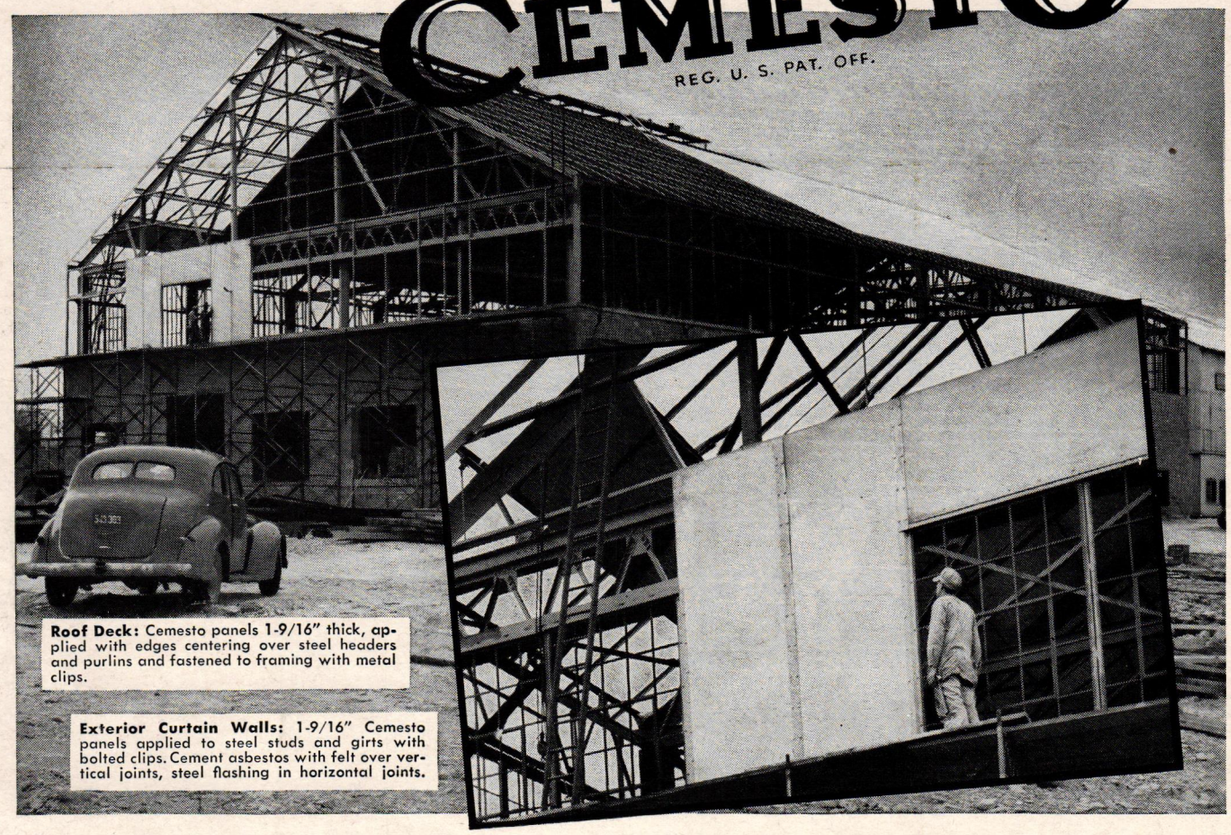


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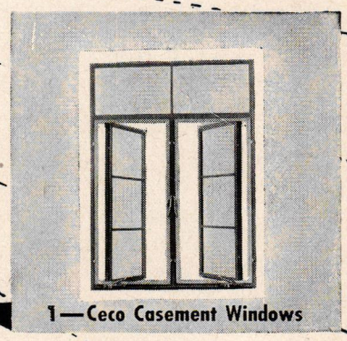


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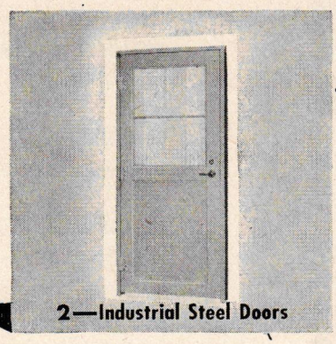
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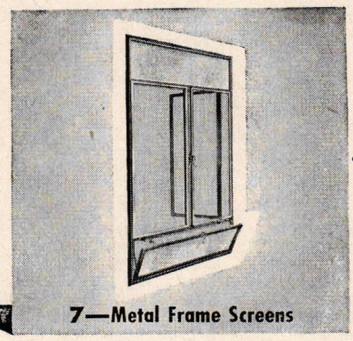
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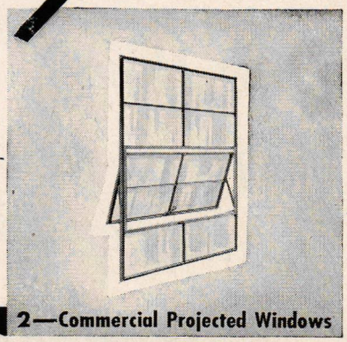
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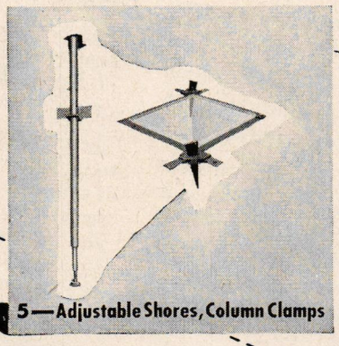
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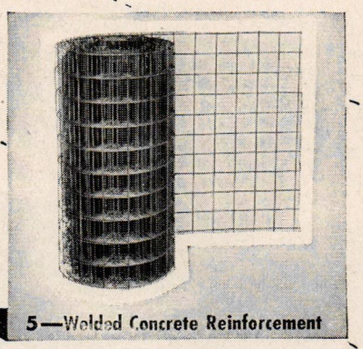
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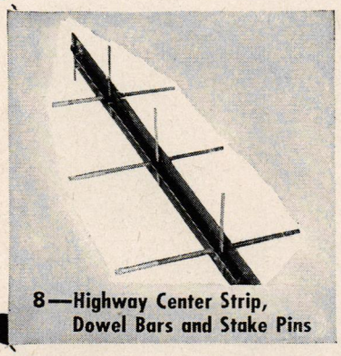
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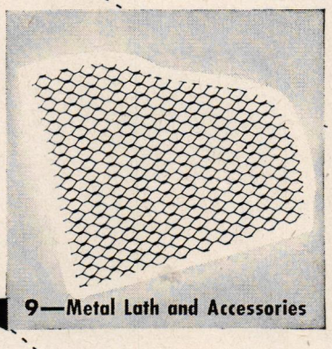
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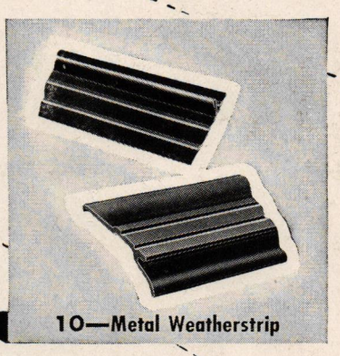
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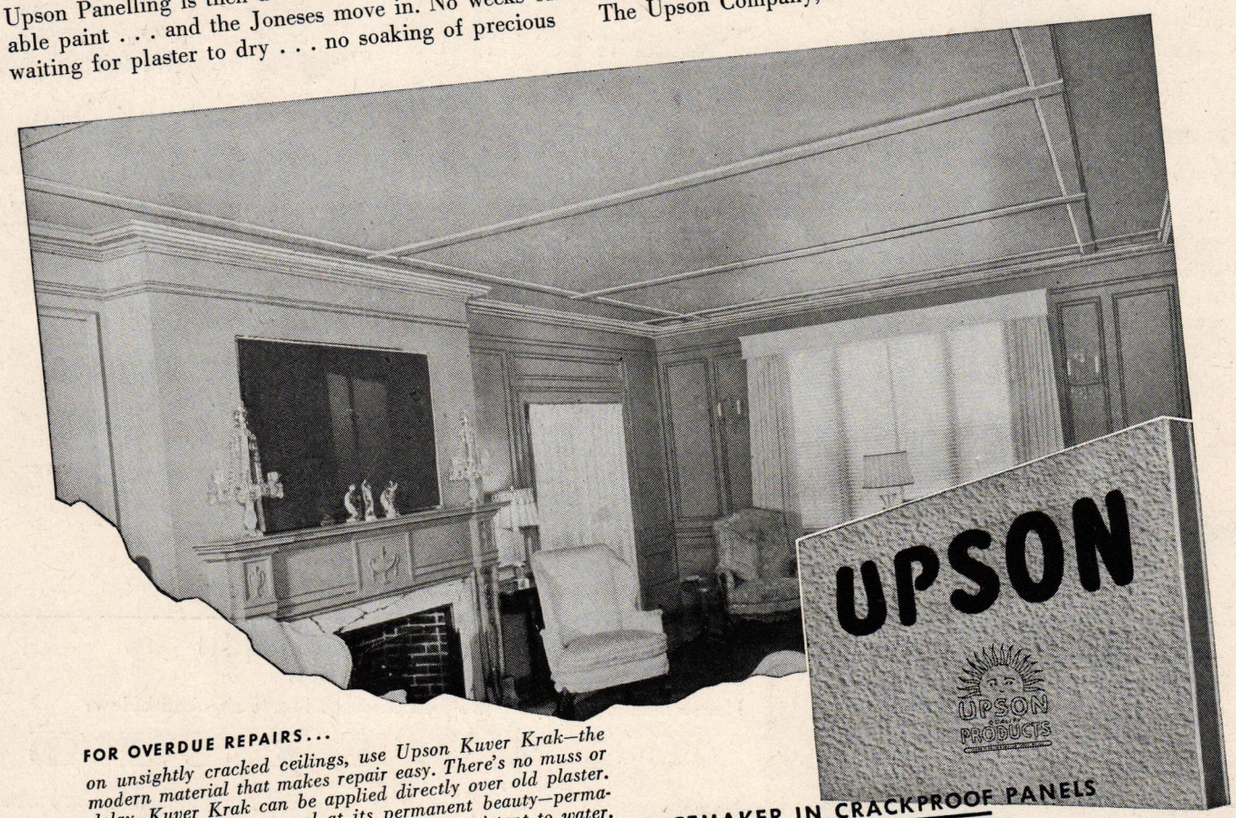
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NEWS

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BUILDING MONTH. January had clearly set the year's building pattern. Statistics told the story: during the month contract letting for industrial and commercial construction had slowed down, residential contracts had climbed steadily ahead. Back of the statistical curve loomed a hundred other Building stories—the 38,000 houses already scheduled under the new HH priorities plan, the fact that even in winter weather housebuilders were plugging away at the Great Housing Shortage (oddly enough, clement New Orleans was the only U. S. city which showed almost no housebuilding for the month), the dozens of new enterprises like Oklahoma City's Associated Veterans, Inc., a firm formed by veterans to employ veterans to build veterans houses.

The statistics also reflected a new and warranted reluctance on the part of Building's big customers to drain the lean materials supply away from urgently needed housebuilding. In Des Moines, for instance, Gardner Cowles, Jr., publisher of the prosperous *Register* and *Tribune*, announced a new plant, completely air-conditioned, with ground-floor press room to be on display through large view windows. Cowles hoped to start construction by spring, but said: "The housing shortage in Des Moines is so acute it should have priority over every other type of building. We are studying the situation to make certain we will not in any way delay the housing program."

In Washington, the House (Lanham) Public Buildings and Grounds Committee had the same notion, voted to postpone all new federal office building until the housing emergency eases off. This means sidetracking $300 million worth of federal building.

Reconversion policy had clearly switched from priority for industrial and business building (which got the first green light because the new facilities meant the creation of new jobs) to priority for houses. By now, everybody agreed, the switch was imperative. The plight of Albert Lea, Minn. was typical. The town that became famous for postwar planning (Jobs, Inc.) found that it had left one thing out of its plans—housing. Everybody had a job last month in Albert Lea, but an uncomfortably large number of people didn't have houses. Like many another anxious customer, Albert Lea looked hopefully to prefab as a quick way out: a local producer was turning out emergency units to sell for $3,000, while Jobs, Inc. was arranging installment financing for buyers.

The 50 per cent priority for housebuilding seemed too little to some. In Rochester, N. Y. a citizens' mass meeting urged an indefinite suspension of all but residential building. In Washington, Representative Wright Patman, cross-questioning the new Housing Expediter, urged allocation of 100 per cent of scarce building materials for veterans' housing, with only a "hardship clause" to help out other types of construction. It was time, Patman said, to stop building night clubs and bowling alleys.

The new housing chief, Wilson Wyatt, emphasized that the housebuilding emergency could not be solved entirely in Washington. There must, he said, be local planning and local action. But many a city still argued over ways and means. A typical report came from the FORUM's Oklahoma City correspondent:

"Right now there is a hot fight in progress on converting barracks at a nearby airfield into homes for veterans. The city administration is only mildly enthusiastic, being pretty well dominated by union labor. Builders are also putting on pressure against such a conversion. They claim they can do the job better and cheaper, if the government would release the materials. Right now, the greatest shortage is in wondow glass and plumbing fixtures. At least 100 homes would be ready for occupancy if it were not for these shortages."

WASHINGTON

WYATT TAKES OVER

New housing chief may back high percentage FHA loans to builders.

The Housing Expediter and the new National Housing Administrator*, Wilson W. Wyatt, had minced no words. He was walking into one of the toughest jobs in Washington and he wanted no hamstringing interference. He had asked for more than "unlimited authority to make recommendations." Last month he got more power than any other Washington housing chief had ever had. The executive order granting part of it was drafted for him as a farewell gesture by John Blandford, stepping out as NHA administrator to become budgetary adviser to the Chinese government (as predicted by FORUM, Jan. '46).

Wyatt had made it clear that he intended to deal with the housing shortage as an emergency problem of first importance, that "business as usual was out", that unconventional methods would be used. He promised: "Where there are bottlenecks, they will be broken. Where there is red tape, it will be cut."

He had hoped to have a precise plan to offer at his first appearance before the House Banking Committee, now mulling over Representative Wright Patman's bill to control house prices. But when he met the Committee at the month's end, the White House had still not approved his program, reportedly hesitating chiefly on a proposal to subsidize production of short building materials.

If the White House approves, the program will look something like this:

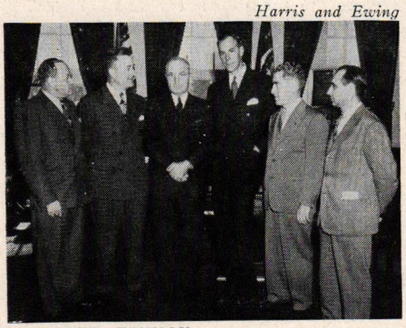
New Title VI. Item most likely to be included is re-enactment of FHA's Title VI,

* There is no legal way to merge the two titles, so in order to have the authority he needs Wyatt must hold both jobs.

under which insurance would be provided for high percentage loans made direct to builders. Officials believe that a separate Title to cover present risks would encourage FHA to take a more lenient attitude in accepting appraisals made on the basis of today's prices, and that the high percentage loans would encourage builders to rent housing. Price ceiling for houses to be insured under Title VI would probably be $7,500—or $60 a month for rental housing.

Material Subsidies. Many doubted that there would be enough materials to build even 400,000 houses this year. One quick way to step-up production, Wyatt thought, might be federal subsidies. War metal

Harris and Ewing



PRESIDENT TRUMAN confers with leading housebuilders on material bottlenecks: (l. to r., above) Harry J. Durbin, Detroit; Robert P. Gerholz, Flint, Mich.; President Truman; Frank Cortright, Washington; Ralph S. Duke, St. Louis; Joseph Meyerhoff, Baltimore.

Reni



HOUSING CHIEF Wyatt (center) meets with producers' representatives: James W. Follin (l.) and Douglas Whitlock.

production provided a precedent; the government had told high-cost mines to get the metal out and count on federal absorption of the difference between cost and a fair market price. Under the plan now being considered for building materials, the government would similarly underwrite production of scarce building materials, especially those which bulk large in the finished cost of the house. The producers themselves (forseeing an inevitable noose somewhere in the bonanza) generally opposed the plan, said that price ceiling increases would do the same job.

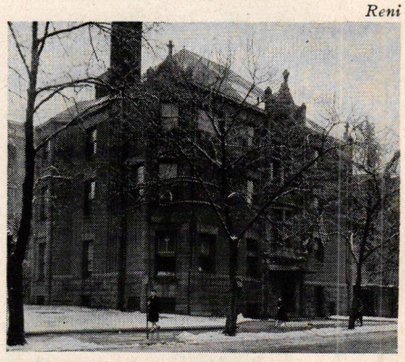
500,000 Aluminum Houses. Wyatt also might ask (although some of his early enthusiasm seemed to have dwindled) for federal funds to underwrite production of aluminum houses in idle aircraft plants. Senators Kilgore and Mitchell had already proposed such a bill (FORUM, Jan. '46). But many an established prefaber complained that the proposal, like much that was going on in Washington (see below), would bypass him completely while encouraging newcomers with untried systems. The sponsoring Senators obligingly went to work on an amendment that would guarantee a market for established prefab systems, also considered an amendment that would offer loans for equipment purchase to small producers of building materials.

Legislation. While Wyatt did not make the proposal, others suggested that necessary authority for dealing with all aspects of the housing problem might be secured by combining the Mitchell-Kilgore with the Patman bill and adding other provisions. Chances for the Patman proposal to control house prices are still uncertain. In his mid-January message, the President had given it unqualified approval. He had also strongly endorsed the Wagner-Ellender-Taft bill: "Prompt enactment of permanent housing legislation along these lines will not interfere with the emergency action underway. On the contrary, it would lift us out of a potentially perpetual state of housing emergency. It would offer the best hope and prospect to millions of veterans and other American families that the American system can offer more to them than temporary makeshifts."

HH Priorities. Meanwhile, the government's first solid step to meet the housing emergency—the HH priority program—was moving briskly along. By the month's end, applications covering 38,191 houses had come to FHA field offices. Of these 44 percent were in the price field of $7,500 or less or the rent bracket of $60 or less. Only in Washington and Los Angeles did applications bunch at the $10,000 ceiling.

There had already been a few changes in the program: Builders will have 90 days to start houses before priorities become invalid. Clay soil pipe has been added to the list of ten critical materials. Industry arguments persuaded CPA to change its mind about requiring producers to fit their distribution percentages to the number of HH priorities held by dealers.

Reni



NATIONAL HOUSING AGENCY is also caught in housing shortage, losing its own Washington home to the Motion Picture Association of America (Eric Johnston is the new head), who bought building from Library of Congress.

HOW TO SOLVE THE HOUSING EMERGENCY

Plenty of remedies have been proposed to meet the Great Housing Shortage. They range from the stock exhortations to reform—or socialize—or industrialize the housebuilding industry to such homely and immediate solutions as remodeling the nearest empty building. On not many of them is there any general agreement. Washington chiefs last month still fought over the new housing expediter's emergency program. New York had reconciled itself to Quonset huts, but many another city still stubbornly refused to admit even prefab. Here is a check-list of ways now being discussed to get 3,500,000 house-hungry Americans under roof as soon as possible:

1. Re-enactment of FHA Title VI insurance to provide high percentage loans direct to builders on houses selling for not more than $7,500.
2. Federal subsidies to stimulate production of building materials in short supply.
3. Federal aid to start mass production of prefab aluminum houses in war surplus aircraft plants.
4. Appropriation of federal and/or state funds to build emergency housing.
5. Stoppage of all non-residential building for an emergency period.
6. Reconstruction Finance Corp. backing for large rental units.
7. Moving of demobilized war housing to needy cities. (Federal funds have already been appropriated to pay the moving bill.)
8. Conversion of empty military barracks. (So far, only New York State has undertaken such a project.)
9. Conversion of empty war plants.
10. Conversion of obsolete battleships (discussed in New York and San Francisco), of old river boats (discussed in St. Louis), and of discarded bombers (Cleveland).
11. Fitting of summer homes for emergency occupancy.
12. Municipal appropriation of idle property.
13. Share-your-home campaigns.
14. The St. Louis builders' "two for one" housing plan, which calls for temporary finishing of a single house to accommodate two families.
15. Kansas City's proposal to build two-car garages, temporarily fit them as housing.
16. New York's scheme, opposed by many civic groups, to remodel old-law tenements with the aid of tax exemption.
17. Michigan's plan to subsidize bus fare, making permanent war housing at Willow Run available to Detroit workers.
18. Housebuilding, housebuilding and more housebuilding!

PREFABRICATION

SHUT-OUT

No material priorities for prefabers.

This seemed the very moment for which the industry waited. Transformed by government war orders from a gleam in a promoter's eye to a lively industry with a record of more than a quarter million houses, prefabrication, its advocates had promised, would now produce the miracle house for which the nation waited.

But although it was high time for a miracle (some 3,500,000 Americans would be doubled-up or walking the streets by the year's end), the industry had not yet managed to pull even a fair-sized rabbit out of its hat. Last month Macy's started to take orders for C. Vaux Wilson's Precision-Built House, quoted prices ranging from $5,000-$10,000 for 3-6 room models. John A. Johnson showed a similar system at Wanamaker's (see cuts, right). Except for these well-known precutting systems, there was not much to be seen.

Not only was there no miracle, but last month the prefabers faced an inadvertantly slammed door that seemed to shut them out of 1946 housebuilding altogether. When the government's HH priority program had been drawn up, nobody seemed to have thought about the prefabers. As it stands, the prefabers cannot get priorities to buy materials because they cannot comply with the requirements set up for the conventional housebuilder.

To the Civilian Production Administration, the prefabers put their case:

- They could finish houses in 10-20 days as against the 60-90 period required by the average housebuilder.
- They had a total plant capacity (59 plants in 30 states) that would produce at least 145,690 houses in 1946—or 193,655 houses, if they worked two shifts.
- They could produce at least 30,000 houses during the remaining winter months, when conventional housebuilding is stalled in many parts of the country.

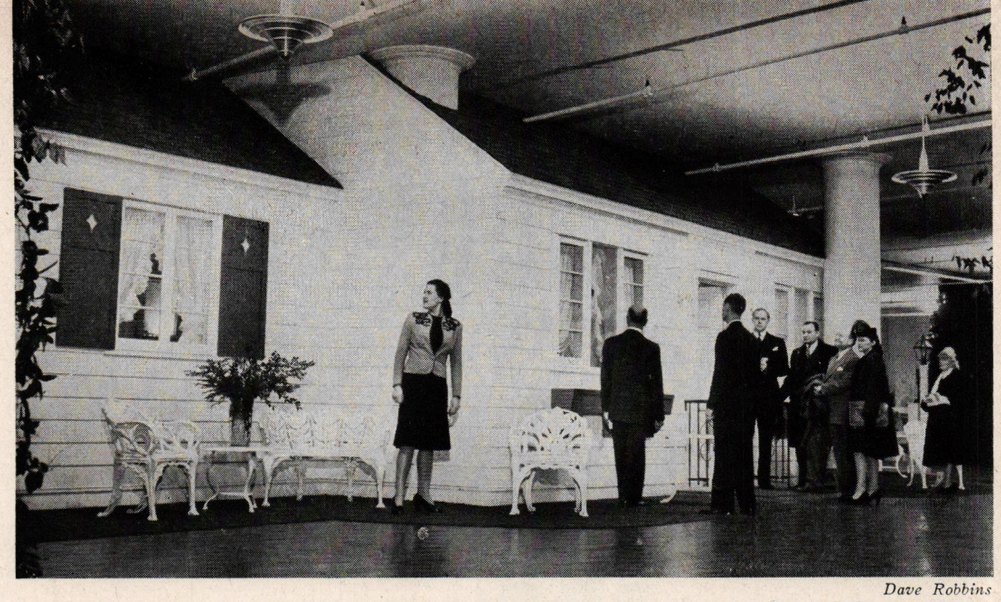
CPA hastily appointed a prefab industry advisory committee, gave signs of redrafting the priorities regulation to give prefabers a chance to build up a materials inventory with the requirement that it be used exclusively for homes for veterans. With this go-ahead, the prefab industry could reasonably expect to corner at least one-fourth of the 1946 housebuilding market.

PACKAGED HOUSE ON MARKET

Colorado Fuel and Iron backs Wachmann-Gropius panel system.

One well-known prefab house stepped closer to the hungry market last month. The General Panel Corp. reinforced its financial position, started erection of its first display houses (at a site near La-

(Continued on page 8)

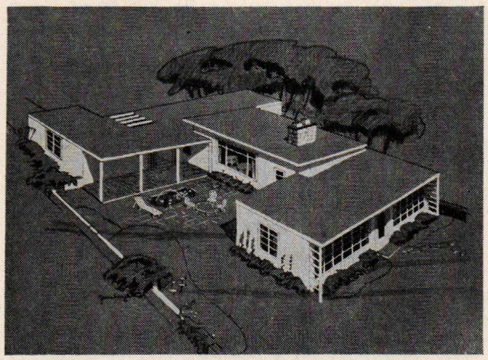


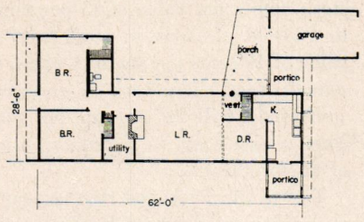
Dave Robbins

FULL SIZE HOUSE, COMPLETELY EQUIPPED AND FURNISHED, IS PREVIEWED BY PRESS

DEPARTMENT STORE SUBDIVISION contains eight preassembled houses

THE MADISON SHELL PRICE: $6,136

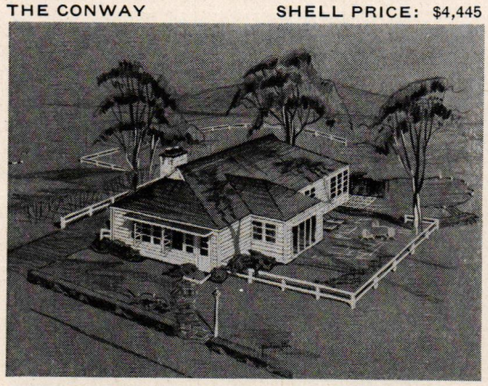


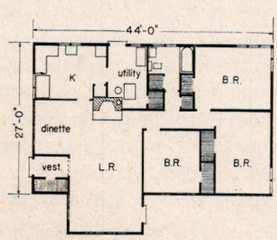


Starting late but fast behind Macy's and Gimbel's (FORUM, Jan. '46), John Wanamaker department stores last month tied in with the building business. Again, it was the result of collaboration of a big store, which looks on a house exhibit as a potent aid in selling furniture, and a prefabricator who looks on department store display and advertising as an effective and inexpensive promotion. In this case, the prefabricator is General Contractor John A. Johnson's Pemberton (N. J.) Lumber & Millwork Co.

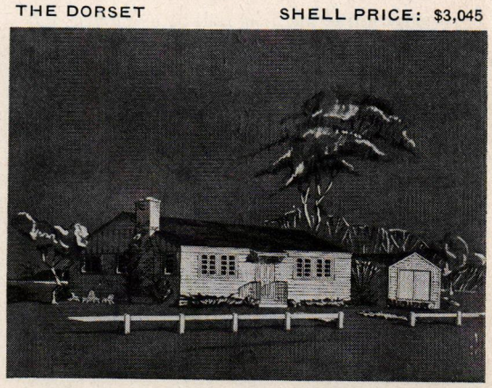
Wanamaker's $100,000 combination furniture and house show is comprised of six complete full-scale houses, a vacation lodge and beach cabana. Each is tagged with a firm price, ranging from $2,500 to $6,500, but covering only the house shell. Johnson will fabricate and deliver preassembled walls, floors, and roofs; local contractors will prepare the site, assemble the sections and finish the house. Prices for complete houses run about 2½ times shell price.

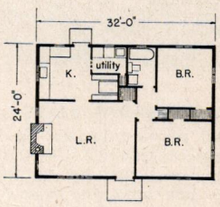
THE CONWAY SHELL PRICE: $4,445

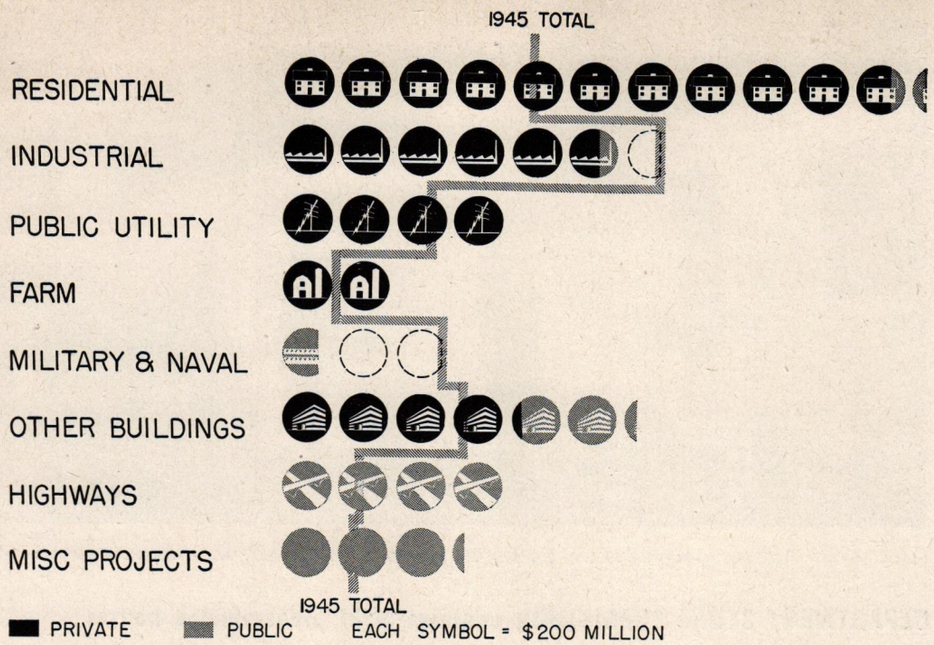




THE DORSET SHELL PRICE: $3,045







DEPARTMENT OF COMMERCE predicts a $7,500,000,000 new construction market for 1946, with public building accounting for only a very small percentage of the total volume (see chart, above). Department of Labor is even more optimistic, forcasting an $8,300,000,000 new construction market for this year. But government statisticians agreed that all bets are off if major strikes are not settled by February 15. If strikes drag beyond that date, Building will be slowed below these estimates. The Federal Works Agency also said that a 25 per cent decline in anticipated public works construction is likely because of current price rises.

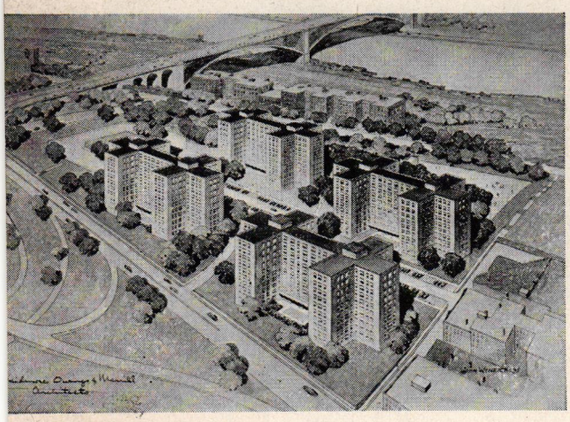
Guardia Field, in Queens), and prepared to put its first public stock issue on the market.

General Panel's product is the Packaged House designed by New York architect Konrad Wachsmann, recently elected Corp. president, and by Harvard's Walter Gropius. General Panel's recent alliance with the Colorado Fuel and Iron Corp. gives this firm and its affiliates, the Wickwire Spencer Steel Corp. and the American Wire Fabrics Corp., exclusive rights to produce and distribute the Packaged House. Counting on a starting volume of at least 3,000 houses a year, the Corp. has plans to build factories on the West Coast, in Colorado and in New York. Until these are built, sub-contracting firms will be employed, and houses will be turned out "as soon as materials are available."

Present designs call for wood panel construction, but new studies are underway. Hope is that steel may be used for a large part of the structure.

Late last month the firm boosted its stock authorization to 60,000 shares of preferred stock with a par value of $5 per share and to 950,000 of common stock with a par value of 10 cents per share. Of this, 60,000 parcels (one share each of common and preferred) will be put up for over the counter sale early in February, at a price of $5 for the unit.

Two of the Packaged Houses soon to go on display are designed by Wachsmann to sell for $4,000. The other two are designed by Gropius and Richard Neutra and intended to sell for $7,000 and $9,000.



NEW YORK SAVINGS BANKS announce new $4,750,000 housing project in Bronx. Plans by Skidmore, Owings & Merrill call for four buildings to house 700 families. The city plans to buy adjoining land for the Cross-Bronx Expressway and for a park.

BUILDING MONEY

BIG INVESTORS BUYING ACTIVELY

Connecticut insurance companies are newcomers in real estate market.

Thanks to a war-boomed market, financial institutions have unloaded most of the real estate they involuntarily acquired during the depression. Now, with assets bulging and new mortgage business slim, these institutions are again becoming landlords—but on a selective basis, building or buying the properties they want. Last month these new moves spotlighted the trend:

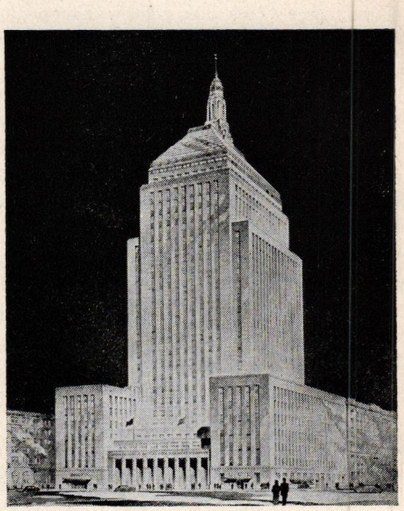
▸ Connecticut General, acting under a new Connecticut law which permits insurance companies to invest 5 per cent of their assets in any way they please, purchased Best & Co.'s department store in Winnetka, Ill.

▸ Connecticut Mutual outbid the First National Bank of Chicago for the site of the 43-story tower section of Chicago's Morrison Hotel. Winning bid for the 90 x 99.5 ft. plot was $1,250,000.

▸ Aetna, another Connecticut company, bought the Macy-controlled department store of L. Bamberger & Co. ("One of America's Great Stores") in Newark, N. J. for a price "in excess of $6,500,000".

▸ Prudential, taking advantage of legislation enacted last year in its home state of New Jersey to permit real estate investment up to 5 per cent of assets, continued to acquire chain store properties in 18 states.

▸ John Hancock, already starting a 26-story building for its home offices in Boston, announced its plan to erect a $12 million, 1,200-unit residential project on 130 acres of old golf course in nearby Brookline and



CONSTRUCTION will start immediately on John Hancock home office building in Boston, first postwar skyscraper to be announced. Cram and Ferguson are architects.

West Roxbury. Although construction will not start until local zoning regulations have been amended and material costs, wages and government restrictions have leveled off, plans are actively underway. Olmstead Brothers are planning the site. Architects Perry, Shaw and Hepburn have been commissioned to prepare the preliminary designs in consultation with architect Van Ness Bates, a Bostonian retained by John Hancock to supervise construction. Tentative plans call for a "buffer strip" of detached single-family houses (which may be sold) to separate existing dwellings from the two-story garden apartments which will comprise the project proper.

▸ An unnamed insurance company but "one of the nation's largest", according to the *Detroit Free Press*, wants to build a $50 million project in Michigan but is holding up the job because "of unsatisfactory laws". As a result of the newspaper's report, Governor Kelly last month ordered a thorough

investigation of the laws, pointed specifically to a constitutional provision, adopted in 1850 and re-enacted in 1909: "No corporation shall hold any real estate for a longer period than 10 years, except such real estate as shall be actually occupied by such corporation in the exercise of its franchise."

▶ Metropolitan Life already has $100 million invested in company-built housing (half of it in the 12,272-unit Parkchester project in New York's Bronx), is spending $100 million more on the completion of two war-delayed projects in California and on three new Manhattan projects.

▶ Equitable is adding 400 units to its first housing project (Clinton Hill in Brooklyn), indicating that the company has found housing a good investment, that additional projects may be forthcoming.

▶ New York Life, Mutual and Prudential, who are classed with Metropolitan and Equitable in Insurance's Big Five, are planning to follow the leaders into the large-scale housing field.

▶ New York's mutual savings banks are also building rental housing projects, together have some 3,000 dwelling units under way in their city-assisted, slum redevelopment program.

Significance of the accelerated interest of these financial institutions in real estate investment is obvious in the size of their assets. Insurance companies alone have $44 billion. If only 5 per cent of this were invested in real estate, it would mean $2.6 billion for Building.

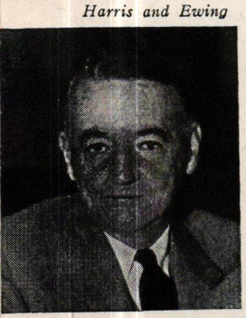
BUILDING BACKER

Allied Building Credits moves ahead.

Allied Building Credits, Inc., one of the nation's biggest backers of builders and dealers, took steps to insure that it will sell its share of construction loans when the building upturn comes.

Step No. 1 was the election of James Twohy as chairman of the board. Twohy had just finished a six-year governorship of the Federal Home Loan Bank Board, had previously supervised the reconditioning operations of the FHLBB's Home Owners Loan Corporation. (Into Twohy's FHLBB chair as acting governor went President Ralph H. Richards of Pittsburgh's Federal Home Loan Bank.)

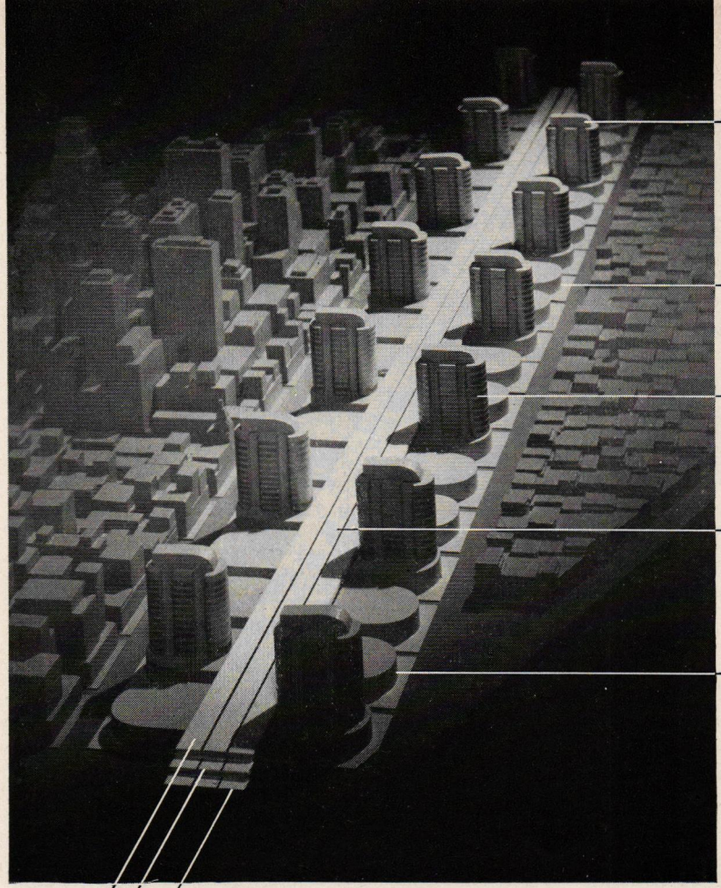
Harris and Ewing



Chairman Twohy

Second step was Allied Building Credits' announcement that new offices, in addition to its present 32, would soon be opened throughout the country to finance house-building and light commercial and industrial construction. Founded by Weyer-

(Continued on page 10)





Egmont Arens

Fairchild Aerial Surveys

TRAFFIC SOLUTION

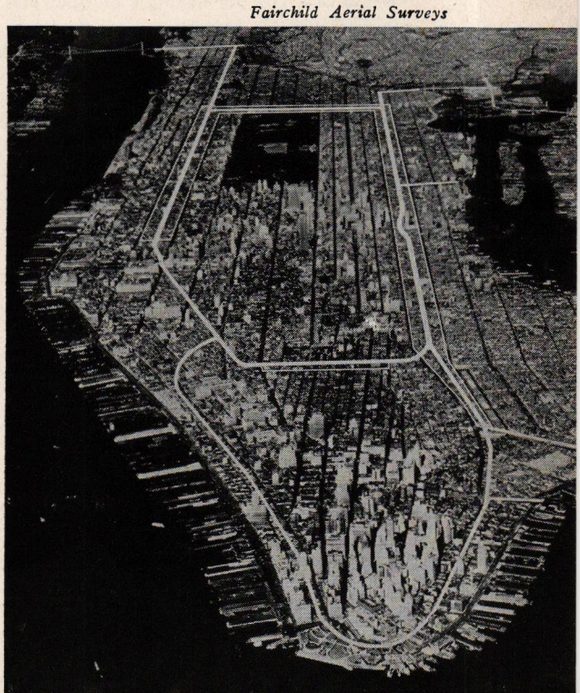
Triple-deck expressway for New York.

Industrial designer Egmont Arens last month offered New Yorkers a scheme for an arterial highway that would loop Manhattan's business districts, clear its slums, solve its tightening traffic problem.

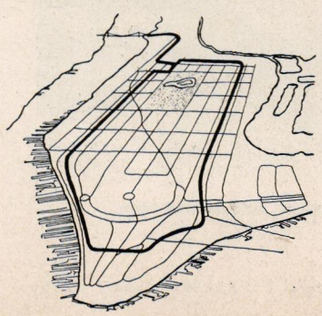
Arens, who has designed dish washers, boats and beauty equipment, cans, bottles and trains, attacked the map of New York with a bold hand. His proposed "Inner Loop Skyway" is a 27-mile rooftop level roadway linked to a block-wide belt of housing, mass garage systems, and terminal systems. Ringing the city's twin skyscraper sections in a double-eight, the highway would follow the city's slum-line. The plan also calls for housing for 100,000 low-income families, to be subsidized from the profits of the coordinated enterprise.

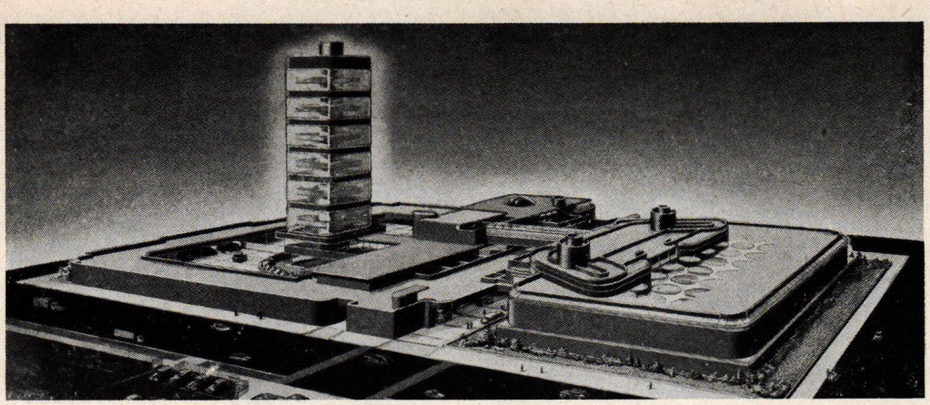
Arens' handsome scale model shows a triple-deck, 200-ft.-wide roadway, linked to all distribution and power systems, including "atomic energy, if ready." Said Arens: "The skyway is no palliative, but has been planned with a vehicular capacity big enough to eliminate traffic congestion in Manhattan *for all time*."

Routed on an inner ring of blighted land rather than at the waterfront, the Arens highway is not unlike a six-decker scheme proposed last year by city planner Hermann Herry (diagram, lower right). The earlier plan gave more attention to the island's equally important cross-street problem, calling for an inner system of super-blocks.



DESIGNER ARENS' expressway (above) would be 21 miles long, have 17 miles of triple-deck roadways, each 200 ft. wide, with 4 miles of downtown loop at a 100 ft. width. He figures it would cost about $1½ billion.





ANOTHER FRANK LLOYD WRIGHT BUILDING is planned by Johnson Wax. The new building will house research and technical laboratories and will adjoin the Johnson administration building built in 1938 at Racine, Wis. The present building's glass-walled bridge will be extended to connect the two structures. The new research building is planned around a glass-walled tower or laboratory stack, 15 stories high. All floors are cantilevered off the central shaft, which also houses all service facilities used in the laboratories.

haeuser Lumber Co. to offer financial assistance to its dealers, the expanding Allied Building Credits was recently acquired by the Giannini interests who already control one of the most important West Coast mortgagees, San Francisco's Bank of America, and are reportedly backing the housebuilding team of industrialist Henry J. Kaiser and builder Fritz B. Burns.

In his first appearance as ABC's new board chairman, Financier Twohy put in a plug for the trend toward completely equipped houses: "We hope to make our operations a postwar example of what private industry can do in promoting good construction and sound realty appraisals on the basis of low-cost credit . . . Where possible, a complete house, including insurance and all domestic appliances, will be financed in one loan."

PRIVATE HOUSING AUTHORITY

New firm will offer complete service to make housing investment painless.

The current abundance of building money last month fathered a new kind of real estate enterprise. A public houser, an architect and a mortgage specialist pooled their talents in what they call the nation's first "private housing authority."

Offering a completely packaged service to investors who wish to finance large-scale housing, the new firm—Harrison, Ballard & Allen—intends to make the complex process of building, owning and managing such a development almost effortless for anybody who wants to sign the check for the job.



Partners Harrison, Ballard and Allen

Said Allan S. Harrison, who resigned as director of public housing for New York City to establish the new firm: "Public agencies, insurance and banking interests, labor unions and private investors want to build. But postwar building is hampered now by the necessity for such interests to deal with many agencies to coordinate functions."

Harrison, Ballard & Allen will offer their substantial know-how at a fee that would for a typical $5 million housing development amount to something like 4½ per cent. They also plan to operate flexibly enough to act either as over-all owner's agent or to supplement the real estate staff of the experienced investor.

Partner William F. R. Ballard has been retained by the New York Housing Authority in the design of some of its largest projects, while partner Frederick H. Allen has been Deputy Mortgage Officer at the Bowery Savings Bank. All three men were recently discharged from the armed forces.

STORM WARNING

Big money supply is boosting inflation.

The banking business had never been in better shape, beamed Elliott V. Bell, New York state superintendent of banks. Toting up his books at the year's end, Bell could see only one cloud in banking's sky. But the one he saw was enough to call for storm warnings. Somewhere on the horizon, sharp-eyed superintendent Bell discerned the makings of another real estate hurricane.

He dourly reminded: "Booms do not take place in real estate except that lenders make it possible. Behind the speculator who bids up the price of real property there is frequently an institutional source of mortgage money whose appraisal of the property can be counted on to adjust itself nicely to the borrower's needs."

The "virtually unlimited" supply of institutional mortgage money, Bell said, will be a big help in launching volume housebuilding. But if the big money supply is diverted to boost the prices of existing property, real estate inflation will be the result.

Signs of the coming storm seemed to center over Manhattan. "In two years the average monthly volume of real estate sales in Manhattan has trebled. Refinancing of existing structures has been increasing and has tended in many instances to cancel the amortization payments made in previous years."

Taking a sampling of newer six story elevator apartments refinanced in 1944, Bell found that 70 per cent were for increased amounts, "with 30 per cent calling for larger amounts than the original loans five years earlier." The refinanced loans "also provided for a slightly lower rate of amortization—2.24 per cent, against 2.29 per cent—and a lower rate of interest—4.10 per cent, against 4.54 per cent in 1939. These trends . . . were more pronounced in 1945."

Bell offered some advice: "Those institutions will have best lived up to their responsibilities which keep their sense of values in these times and mitigate rather than intensify those forces which are exerting so strong an upward pull on prices."

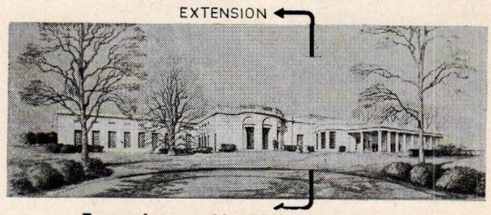
DESIGN

WHITE HOUSE EXPANSION

President's plans run into trouble.

Everybody had moved out of the basement offices in the West Wing. Surveying had been finished. Excavation would soon begin. It seemed a matter of weeks before the President would get the 15,000 sq. ft. of office space he wants, the new auditorium for movies and press conferences.

But late last month Congress woke up to what was afoot at the White House. Peevishly, the House voted to rescind the $1,650,000 approved by Congress to take care of the President's remodeling needs. Complained members: nobody had pointed out that the money would be used not only to spruce up the White House, but also to extend the West Wing—a major alteration of the historic structure.



Expansion would add "L" to West Wing

While Washington writhed with ideological controversy, the District chapter of the American Institute of Architects led the campaign to maintain the classic lines of the President's House intact. The A.I.A.'s role as White House watchdog had historic precedent. Back in 1899 it had persuaded

President McKinley to abandon enlargements of the wings which it believed would dwarf the White House proper. The issue, A.I.A. said, was whether the U. S. wanted the White House to be an office building.

Thundered Representative Howard W. Smith (Dem., Va.): "The White House is more than a residence for the President—it is a national shrine and should be so regarded." Representative Robert F. Rich (Rep., Pa.) had a pat solution: "The President can avoid turning the White House into an office building by reducing federal payrolls." Representative John Taber (Rep., N. Y.) sponsored a way out that appealed to many: let the President have space for his executive offices in the State-War-Navy building, already connected to the White House by tunnel.

EVERYDAY ART

Enterprising gallery shows contemporary designs for better living.

Since 1876 when Minnesota lumberman T. B. Walker invited his neighbors to drop in any time for a look at his collection of Rennaisance paintings, the Walker Art Center in Minneapolis has been busy thinking up ways to bring both Middlewesterners and Middlewestern art into its galleries at a constantly increasing volume. Oldest art museum west of the Mississippi, the Walker Art Center also has many votes from art professionals as the most enterprising in the U. S.

Last month the Center took one more step in its long program to make its art displays a lively part of community life, opened what it calls the "Everyday Art Gallery" (see cuts, right). On show were lamps, glassware from local stores, California pottery, the *Life*-FORUM storage wall—many another "idea for better living." New exhibits, to be installed every two months, will range from perfume bottles to city planning.

The new gallery is the kind of direct link between art and living which is characteristic of the work of director Dan Defenbacher, designer-painter who established 70 community art centers under the Federal Art Program. Director of the Everyday Art Gallery is Hilde Reiss, Bauhaus graduate.

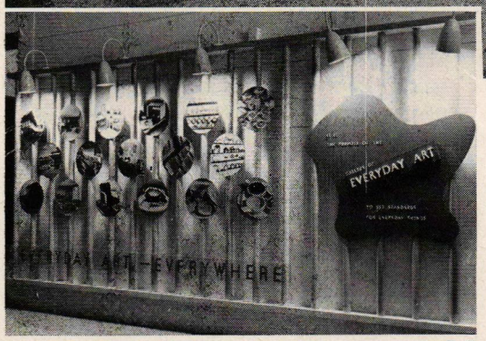
CAMPUS CONTROVERSY

Students unite for modern architecture as prexy plugs for Georgian.

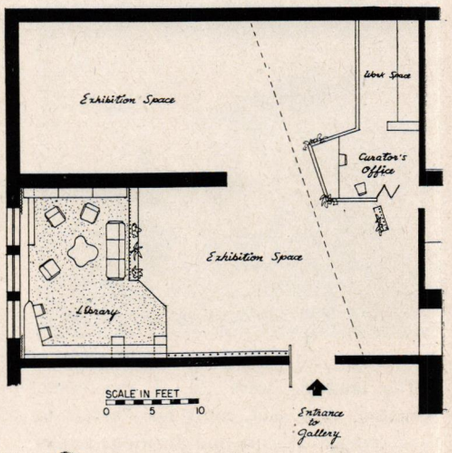
Wheaton's 450 women students filed into the Student Alumnae Building, whose two-story windows and unadorned brick facade testified to the hand of a "modern" architect. The young ladies were hopping mad. They had just read in their newspaper that the college, first in the U. S. to adopt contemporary architecture, was about to abandon the design selected for its long-anticipated art center and "quietly substitute for it a Georgian building."

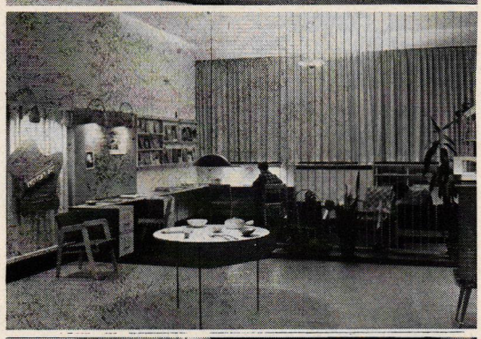
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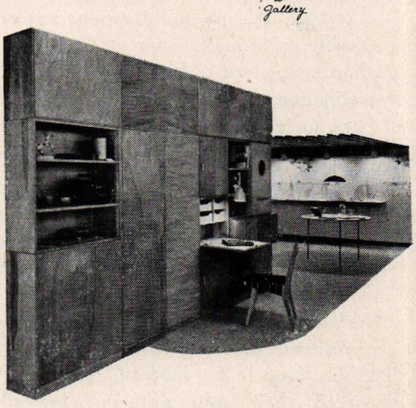


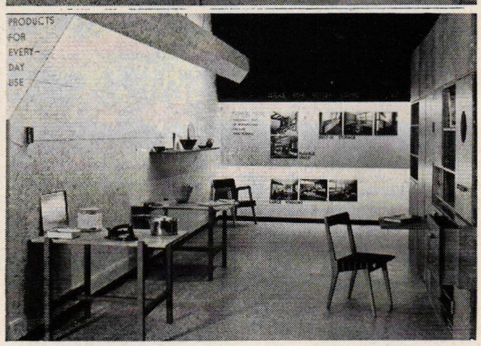


EVERYDAY ART GALLERY opened by Minneapolis Art Center.



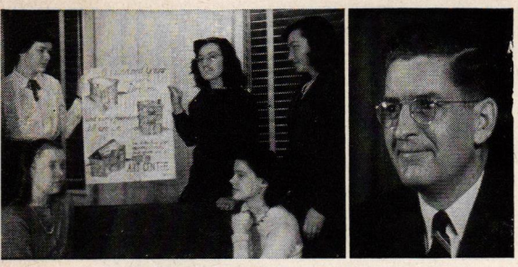




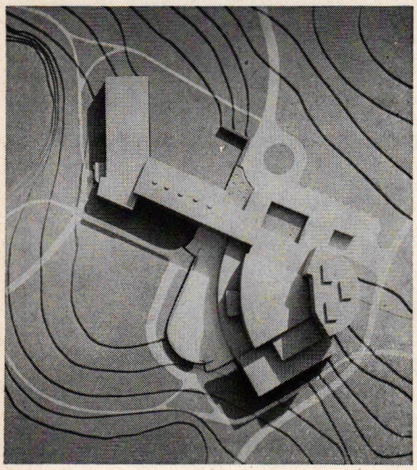


EXHIBITS INCLUDE WELL-DESIGNED ITEMS AVAILABLE AT LOCAL STORES





WHEATON STUDENTS demonstrate for modern architecture as President Meneely (right) plans to substitute Georgian building for modern Art Center (model, below) designed by Hornbostel and Bennett.



The students were all of one mind. Wheaton, they said, must not "revert to dead styles." Posters and drawings advertised their pride in Wheaton's "leadership in adopting modern architecture" and their determination that the college should not go back to traditional designs. They had collected testimonials from Walter Gropius at Harvard, William Wurster at M. I. T. and every other architectural big-name they could think of. Alumna Margaret King Hunter, a practicing architect, was on hand to spark-plug the protest.

The girls politely listened as Wheaton's new president, A. Howard Meneely, angrily spoke his distaste for modern. Then they registered their own opinion (formed mainly by Wheaton's three existing modern buildings, since few had seen much modern in the New England towns from which they typically came). Their barrage of speeches would have been at home in even the most advanced sectors of the profession.

President Meneely's preference for Georgian seemed headed for more trouble. The board of trustees planned to look into the matter at its February meeting, while the American Institute of Architects began to be interested in the college's reported cancellation of a contract awarded on the basis of a national competition. Sponsored by the Museum of Modern Art and by the ARCHITECTURAL FORUM in 1938, the Wheaton competition offered as prize a contract to design the art center. Winners Caleb Hornbostel and Richard Bennett later designed Wheaton's Alumnae Building, science and library additions, but still have on the shelf plans for the postponed art center.

UNO HEADQUARTERS

International competition may be held to select design for world capital.

What will be the biggest design job of the century was clearly ahead as the United Nations Organization site-selecting delegation chose a location straddling the New York-Connecticut state line. Design of the UNO headquarters will be the responsibility of a Planning Commission, whose members—architects and experts in construction, city planning and related fields—will be nominated by the Secretary General and approved by the General Assembly. The Planning Commission will be required to present to the General Assembly by 1947, at the latest, definite recommendations for the buildings to be provided.

The Planning Commission may recommend an international competition as a means of selecting the design for what may become the capital of world government—or it may undertake the design itself. Dr. Stoyan Gavrilovic, chairman of the site-selecting committee, emphasized that his mission had no responsibility for planning for the buildings, but said that he would welcome an international competition. "I can see great interest in such competition," Dr. Gavrilovic told the FORUM. "It would mean the broadest kind of participation and interest in this great task."

UNO headquarters will be a complete city, with its own airport, radio stations, hotels, railway terminals, etc. Dr. Gavrilovic estimated that the permanent secretariat will amount to over 2,000 officials —with their families, about 6,000 persons who will need permanent housing. The three Councils will each have a permanent staff of from 200 to 300. The military staff committee will amount to at least 50. Hotel facilities will be required for the 5,000 members of the General Assembly. In addition, housing will be required for the personnel who will operate the service facilities in the community, and hotel facilities for the general public who will probably visit UNO in large numbers. Eighty special agencies—among them the International Labor Office—have already applied for permanent residence at the UNO site, Dr. Gavrilovic said. The site required will amount to 40-50 sq. miles, he estimated, while the world capital will probably become a city of 30,000 to 50,000 people.

EASY MODERN

House & Garden sponsors designs.

House & Garden put its substantial editorial weight back of new furniture designs which it calls "easy modern." Designed by New York architect Lester Tichy and produced with the cooperation of leading modern manufacturers and the Paine Furniture Co. of Boston, the furniture will soon go on sale at leading department stores in Los Angeles, Atlanta, Detroit, Newark, New York, Cincinnati, Seattle and at the Paine store in Boston.

Tichy designed the furniture as an integral part of the house which he planned for his own family, and which won first prize in *House & Garden's* 1945 architectural awards. For the first public showing last month in Boston, the Paine Co. reproduced the complete living-dining area of the house. To the expertly stage-managed opening came a bevy of notables including Governor Maurice Tobin of Massachusetts, Governor Edward Thye of Minnesota, famed Finnish designer Alvar Aalto, Harvard's Walter Gropius, Catherine Bauer Wurster, and Dorothy Liebes who designed the fabrics used for drapery and upholstery.

Tichy's "easy modern" furniture is in birch, natural or white-lacquered, and includes a hanging desk, a cabinet for radio and phonograph with ample storage space,



HOUSE & GARDEN opens showing of modern furniture designed by Lester Tichy (below, with Mrs. Tichy).



a sideboard with drawers aligned in a clapboard arrangement eliminating hardware, free-shaped rugs which repeat the irregular shape of the low coffee tables.

MATERIAL

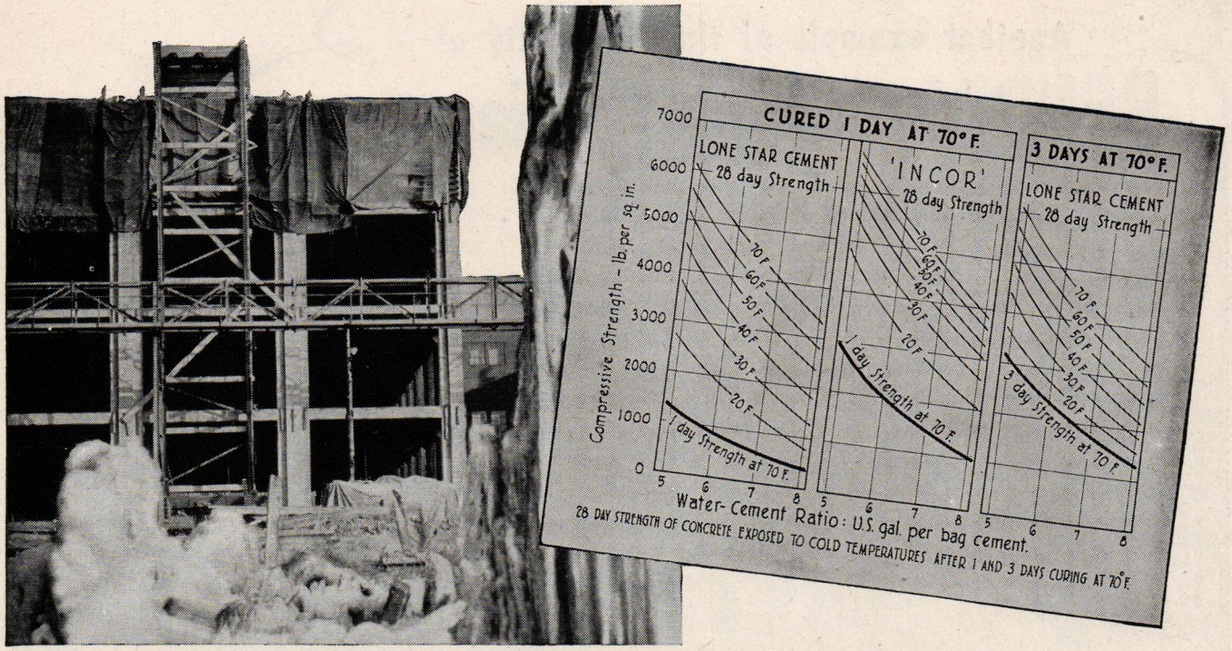
STEEL STRIKE

Few jobs will be stopped, but general slow-down is ahead for Building.

However quickly peace comes to the embattled steel industry, one thing was sure: 1946 building will be slowed down. Schedules, only recently lengthened to allow for 23-week steel delivery instead of the usual 12-16 weeks, will lag even more. Experts said it will take the steel industry at least a month to get back into full production after the end of the strike.

Steel will be shorter than ever. Building, which took 8.9 per cent of the nation's steel supply in October, needs about 15

(Continued on page 14)



FOR SAFE, QUICK, ECONOMICAL WINTER WORK

'INCOR' 24-HOUR CEMENT KEEPS WINTER JOBS ON SCHEDULE—CUTS CONCRETING COSTS

IN cold weather, concrete must be heat protected until service-strong. Heat-cured only ONE day at 70 degrees, 'Incor' concrete is service-strong, safe from freezing . . . and at 28 days produces strengths 25% to 30% greater than even Lone Star Cement concrete cured 3 days. Fast, thorough curing with 'Incor' 24-Hour Cement means safety, speed, economy. Specify 'Incor'*—



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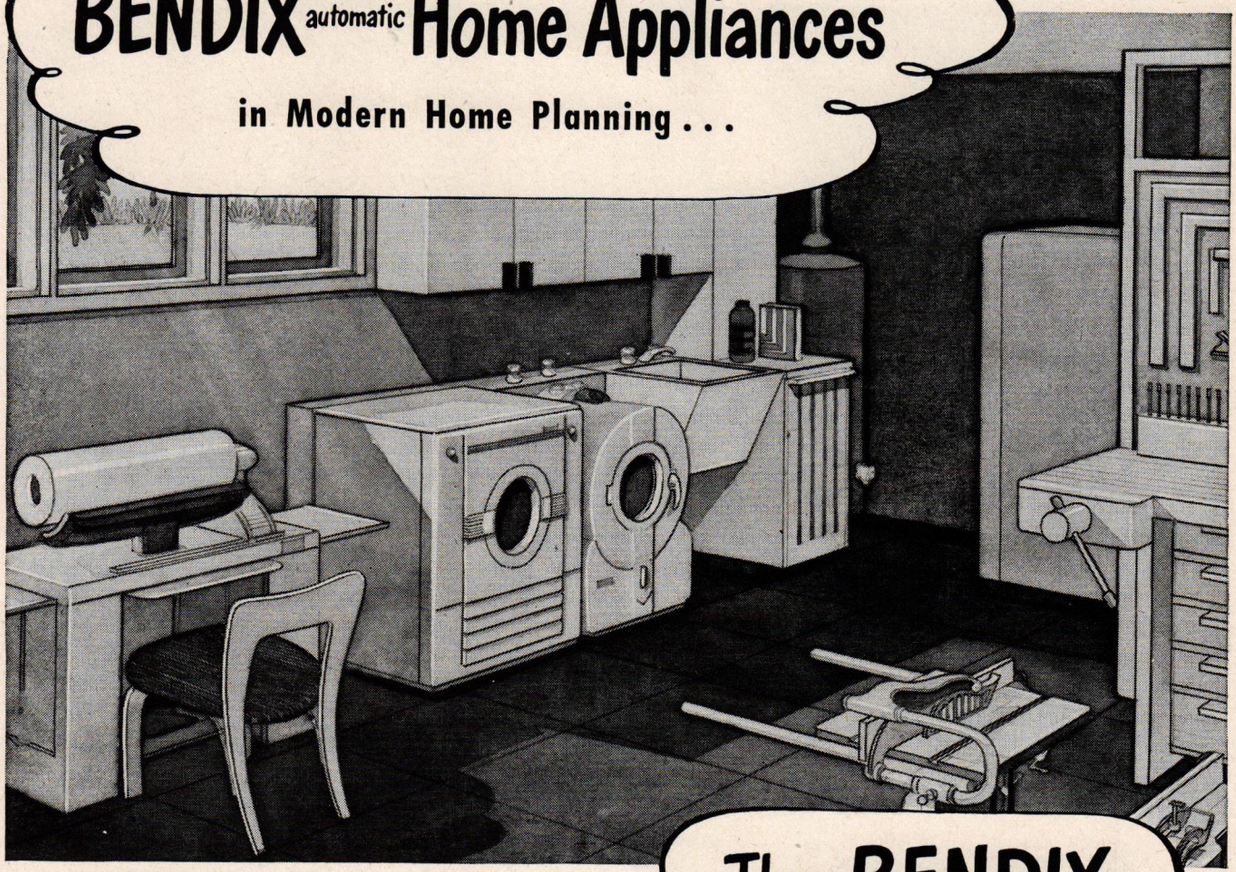
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BENDIX automatic Home Appliances

in Modern Home Planning . . .



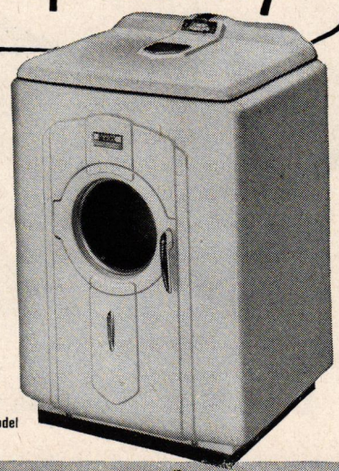
design by L. Morgan Yost, A. I. A.

The BENDIX Workshop-Laundry

Here is an ideal way to consolidate the interests of husband and wife in a modern, practical workshop-laundry—one of the many new home plans, so perfectly built around the Bendix automatic Home Laundry, Ironer and Dryer.

Compact and smart, the Bendix "washer" takes but 4 square feet of floor space. Pre-war proved in 300,000 homes, it washes, rinses, damp-dries, cleans and empties itself, then shuts itself off —all *automatically!* It is available now. The Bendix Ironer and Dryer will be available soon.

See your Bendix distributor for complete information on the Bendix automatic Home Appliances for new home planning. His name is in your phone book. Or write us direct, if you prefer.



De Luxe Model

BENDIX automatic Home Laundry

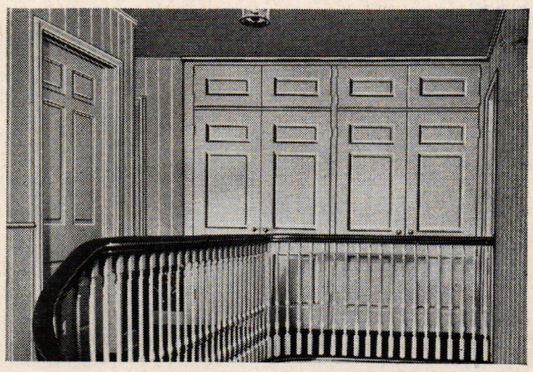
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WHERE do the children's sleds go in summer? Where do the folding lawn chairs go in winter? Problems like these have caused many a headache for householders. The answer, as you know, is more closets—with doors of Ponderosa Pine to make those closets more attractive, more economical.

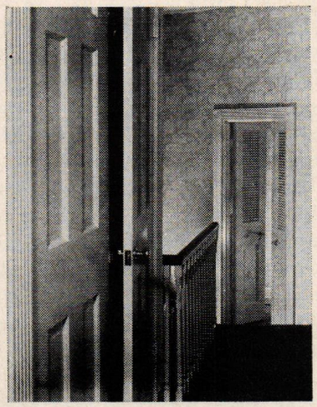
Stock design doors, frames and windows of Ponderosa Pine can go a long way toward giving new home owners the convenience and charm they want—at a price they can afford to pay. The new Ponderosa Pine booklet "Today's Idea House" is full of suggestions on achieving that laudable end. Profusely illustrated, this new booklet should be in your file as a source of inspiration and ideas. Just mail the coupon for your copy—there's no obligation.



Here is a modern "storage wall" that combines up-to-date convenience with traditional beauty. Stock design doors of Ponderosa Pine are available in a wide variety of styles for every building need.



Note how the usefulness of this hallway is increased by the mirrored closet door. The good taste with which Ponderosa Pine woodwork is styled adds lasting value to a dwelling.



Closets with louvered doors, as shown, permit desirable ventilation, yet are graceful and dignified. Features such as this can be fitted into even moderate building budgets, when Ponderosa Pine is used.

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In "Today's Idea House" doors, frames and windows are treated with respect to their functions in making homes more livable. You'll want a copy of this important booklet—and the coupon will bring it to you.



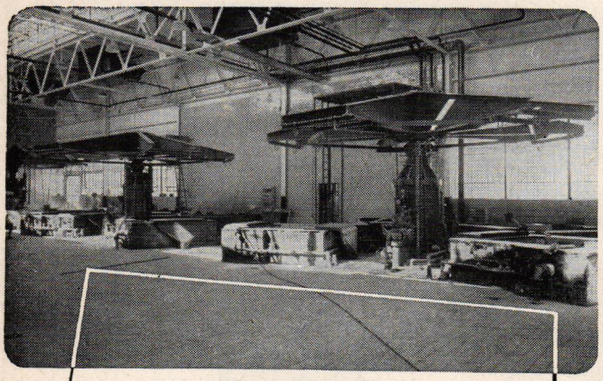
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give **LASTING SATISFACTION**

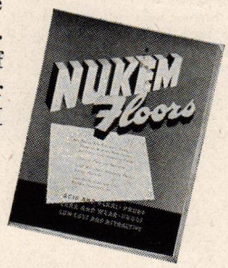
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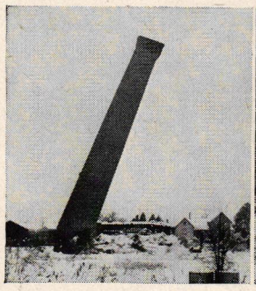
per cent a month to keep pace with a $7½ billion program for the year. But the American Iron and Steel Institute doubted that Building will get this much before the year's end.

Steel shortage and delivery lag will add one more uncertainty to Building's thicket of price uncertainties. Competitive bidding had already disappeared from the Building picture; almost no big contractor will now risk starting a job on anything but a cost-plus basis. Steel difficulties will reinforce this trend.

Last month Building's big steel users, the contractors whose orders measure in thousands of tons per job, told the FORUM that most work in progress will not run into trouble for "several months." Reason: much heavy construction is just getting underway. Excavation and foundation work will keep Big Building busy for weeks.

Thompson-Starrett, for instance, said that none of the jobs on hand had reached the point of heavy steel demand, but "as soon as we hit our structural steel needs, we'll be up against it." Turner, just starting the Johns-Manville laboratories in New Jersey and the New York Cancer Research Institute, said these big jobs will not reach a structural stage for several months.

The Austin Co. reported that only seven out of 160 current projects had been halted. President G. A. Bryant said that in addition to husbanding its basic structural materials the company had anticipated the steel strike with plans to use such substitutions as precast concrete slab to replace metal roof decks. One Austin job that may soon be stymied by the strike is the $1¼ million Bayer-Aspirin plant, now half-way up.





AP Photo

VETERAN BUYER in Flint, Mich., solves material shortage by buying 55-ft. chimney, whose 42,000 bricks will be more than enough to build him a house. (A two-story, 6-room brick house takes about 26,400 bricks).

ELECTRICAL EQUIPMENT RATION

Government asks preference for essential users to stretch out supplies.

While 200,000 striking CIO electrical workers tied up 79 General Electric, Westinghouse and General Motors plants, the Civilian Production Administration asked makers to ration deliveries of electrical equipment. Stocks on hand must be stretched to last as long as possible, CPA said, and distributed where needed to protect public safety and health.

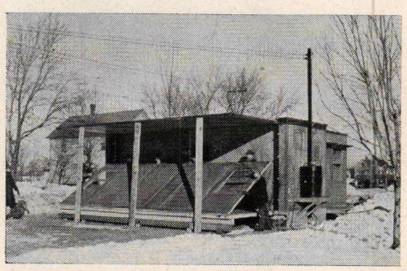
Under the voluntary rationing plan, CPA asks distributors to give preference to hospitals, food distributors, police or fire departments in filling calls for equipment or parts for maintenance and repair. If equipment is not available locally, unions are asked to permit movement from closed warehouses upon CPA certification. Power utilities are asked to defer extensions of their lines to conserve materials.

PAPER HOUSE

Wisconsin mill may soon put small house on market for $2,200.

One bid to ease the housing emergency came from a Wisconsin paper mill, which thinks it may be able to deliver a paper house complete with oil heater and refrigerator for $2,200. The paper house is made from the same basic material developed by the Consolidated Water Power & Paper Co. for the Army Air Forces and used for the floors of troop gliders.

There are still some final experiments to be made before the all-paper house will go on the market. A model has already been tested by a year of Wisconsin weather, but president George W. Mead is not yet quite ready to endorse the paper panels as an exterior finish. Right now the company is building another house, using standard frame construction but finishing the interior with the new paper material. Consolidated has also designed a packaged bathroom, with walls to be made of paper panels.

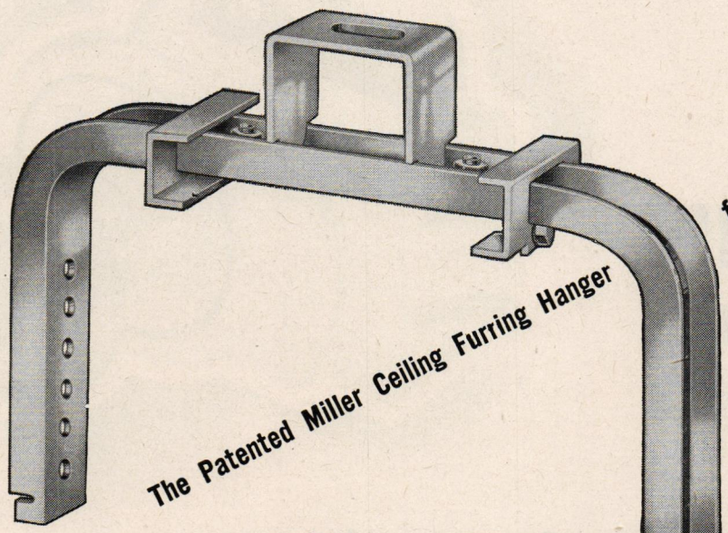


House can be erected by two men

Consoweld panels are made of hard, compressed, resin-impregnated paper. Two panels are joined by thin wood strips and the space between filled with a corrugated

(Continued on page 20)

Backbone of CEILINGS UNLIMITED

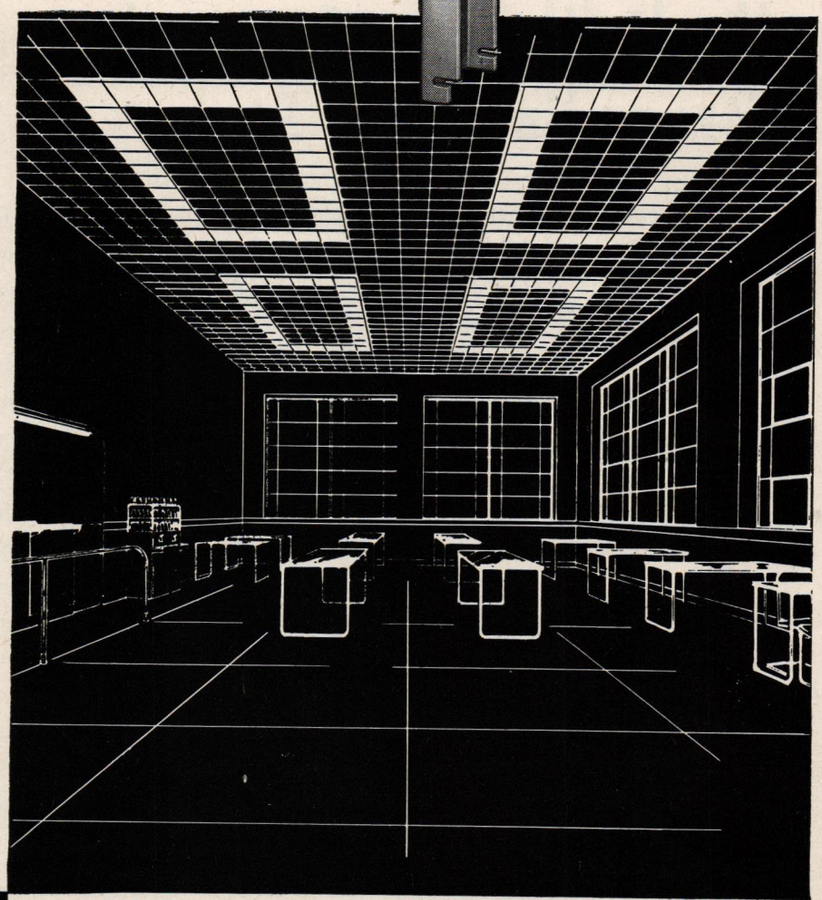


The Patented Miller Ceiling Furring Hanger for any type furred ceiling

The Miller Fluorescent Troffer Lighting System is truly versatile. It suggests new themes. Its many practical applications offer CEILINGS UNLIMITED.

The patented Miller Ceiling Furring Hanger is the backbone of this lighting system. It eliminates the necessity of laboriously fitting recessed lighting into hung ceilings. Instead one simply hangs Miller Ceiling Furring Hangers from the structural Ceiling —and furring, tile and Troffer Lighting System are hung from the Hangers.

Structurally outstanding in its simplicity, its advantages are many—including economy of installation, more "above ceiling space" for piping and air conditioning ducts and assurance of a really level ceiling. Miller representatives are in principal cities.



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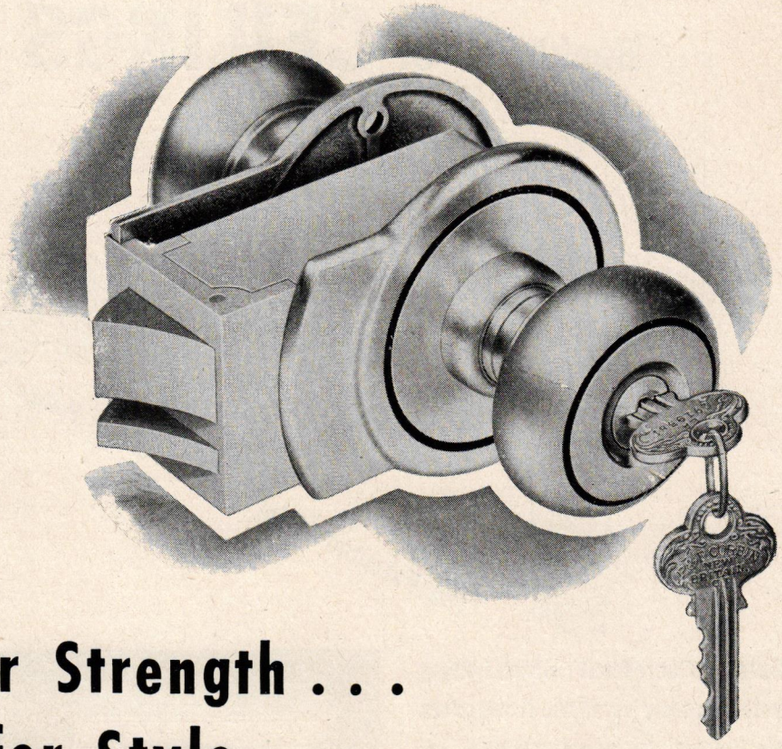
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THE CORBIN RESIDENCE UNIT LOCK



Vault-like for Strength . . . Streamlined for Style

The Corbin Unit Lock, now available *for the first time for residences,* is a streamlined "brother" of the famous Corbin-designed and Corbin-pioneered commercial lock which has proved itself in hundreds of important commercial and public buildings since 1899. It's a lock that says "welcome" to friends and family, a firm "keep out" to the uninvited. It's a lock as smart and sound as it's staunch — from graceful 2″ knob to its one-piece assembly and amazingly easy installation. No mortising is required — just two saw cuts, knock out the block, slip the lock into place, and insert screws.

You will appreciate other new features of the Corbin Unit Lock. *Pin-tumbler* cylinders in outside knob assure positive security of entrance door plus complete masterkeying, if desired.

The Unit Lock is a *privacy* lock for bedroom and bath. A button on the inside knob locks the door yet releases at the slightest turn from the inside. Accidental locking while door is open is prevented by an automatic release. A special release on the outside is provided for emergencies such as children locking themselves in.

Latchbolts of the Corbin Unit Lock are of the pivoted swinging type for easy, silent closing. On outside doors *the keyhole is in the knob.* Rust-free brass and bronze metals are used throughout.

Unit Locks are available in three designs and eight finishes and are constructed with the traditional Corbin craftsmanship which has long made the name Corbin the "keyword" in lifetime hardware. Parts are never detached, so the Unit Lock always works properly, smoothly.

P. & F. Corbin

Good Buildings Deserve Good Hardware

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in floors, too...

IT'S THE *Finish* THAT COUNTS!

For Tomorrow's Homes the Winner Will Be Bruce Finished Floors!

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1 ***Smooth Sanding***—Each strip sanded to perfect smoothness on multiple drum, precision sanders. No sander marks.

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5 ***Infra-red Drying*** applies heat uniformly . . . welds finish into a tough, even seal. No "unfavorable drying weather."

6 ***Extra Buffing*** with high-speed brushes burnishes finish into wood . . . provides a harder, smoother surface for waxing.

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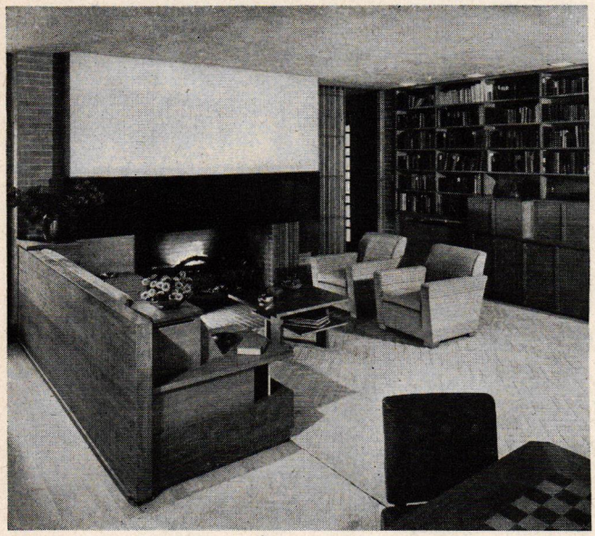
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America's Beauty Floors

Worth Waiting For!

The finest flooring in our history—Bruce Finished Flooring with the new Factory Finish—will be available as soon as manufacturing conditions permit. New technical developments will give Bruce Finished Flooring greater beauty, longer wear, greater cleaning ease. This is truly America's newest flooring sensation—worth waiting for.

BRUCE FINISHED FLOORS



Living room in residence, Kohler, Wisc. *Architect: William F. Deknotel*

THE MINWAX SCRATCHPROOF FINISH

means no floor re-scraping

OWNERS like MINWAXED wood floors because the finish is really *scratchproof*. Traffic-worn spots never lead to a complete re-scraping and re-finishing job as they do with surface finishes. Just a simple "touch-up" quickly restores full beauty and serviceability at negligible cost and without laps.

A touched-up MINWAX finish cannot show laps because the finish is *in*—and *part of*—the wood. Only the worn spot absorbs the new material. As there is no surface film, there can be no lap.

And because MINWAX is a *penetrative* stainwax finish, it also provides additional advantages to the owner:

- **MINWAX brings out, enhances and preserves the true, natural beauty of the wood with a wax finish in authentic stain colors, or clear finish.**
- **The finish can't chip off or scratch.**
- **The finish improves with age and simple care, each polishing enriching the beauty of the wood.**

These advantages are proved by more than 30 years' service to architects and owners. They are important wherever wood floors are used—in the home, store, office, public building or institution.

For further information write to MINWAX Co. Inc., 11 West 42nd Street, New York 18, N. Y. or refer to Sweet's Architectural Catalog.

For the 28th Consecutive Year
OUR COMPLETE CATALOG IS IN SWEET'S

TRADE MINWAX MARK
WOOD FINISHES
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OTHER MINWAX PRODUCTS
Waterproofings • Dampproofings • Caulkings • Protective Coatings

paper core, which looks like a fuzzy gray honeycomb. Paper panels will be produced in a variety of colors, with outdoor finish on one side, indoor finish on the other.

Plan is to ship the prefabricated paper houses by truck. Two men can erect a house in less than 12 hours. Backers say the paper panels are stronger and more fire-resistant than wood, comparable in weight to aluminum.

SURPLUS STOCKPILES MOVE

Navy sells first big lot of materials.

After considerable heckling from all quarters, the Navy reached into its surplus stockpiles, produced 55 million board feet of lumber and $56 million worth of nails, pipe, plumbing and electrical supplies. This promising lot of building materials will soon go on sale at four naval bases—in Port Hueneme, Calif.; Tacoma, Wash.; Davisville, R. I.; Gulfport, Miss. Said the Navy manfully: "We are pushing out critical items even to the extent of robbing ourselves."

The Reconstruction Finance Corp., disposal agent for surplus building materials, promised that additional military supplies will go on the market as soon as disposal teams can check inventories and ready items for sale. Seventy per cent of all building materials declared surplus by the Army or Navy will go to holders of HH (veterans' housing) or CC (commercial or industrial construction needed to break reconversion bottlenecks) priorities. Sales will be announced in each area by newspaper advertisements. RFC will furnish buyers with detailed lists of stocks and prices. There will be no complicated bidding procedure. Buyers will submit orders, and RFC will assign materials on a proportionate basis.

PEOPLE

LeCORBUSIER IN U. S.

Swiss father of the International Style still does not like America's small house.

"More than anything else, the United States lacks harmony in its living patterns." This is the judgment of Europe's greatest architect, in the U. S. last month on a mission for the French government.

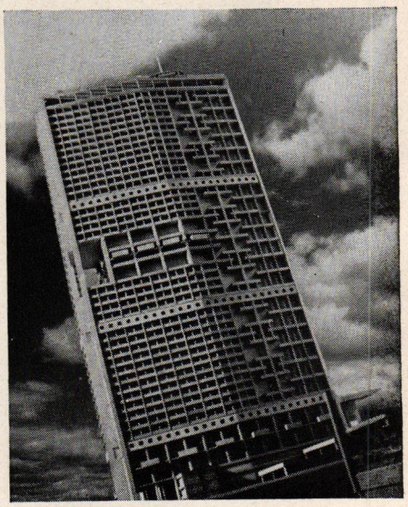
LeCorbusier, who will have a big part in French reconstruction, took time to visit TVA and talk with director David Lilienthal. Here he found the harmony that he missed everywhere else. "The world has forgotten how to smile," he said, "but in the TVA that smile is being brought to life again." Elsewhere, LeCorbusier thought America the most morally troubled and insecure nation he has visited, found in the people no understanding of why they are living or of the long-range purpose of their civilization.



LeCorbusier

The designer of the "machine-for-living-in" showed no sign of reconciliation to the small house. "The real question with which we should concern ourselves is whether in the future small or large houses should be built. One of the most important functions of modern housing should be labor-saving for the housewife, but the small house as we know it now retains most of the inconveniences of the old-fashioned residence . . . The unending American countryside, dotted with small houses, makes an unbearable and monotonous pattern when taken in quantity from the air or from the ground."

LeCorbusier opposed both warring schools of decentralization vs. urban rebuilding. "The question," he said, "is not whether the cities should be rebuilt or whether their population should be siphoned off, but the correlated and rational use of all land."



Model for proposed Algerian skyscraper

Like architects in the U. S., LeCorbusier is much interested in the development of modular standards. He would like to see these applied to prefabrication on an international basis so that, for example, house parts produced in one country would be interchangeable with parts produced in any other. The modular system which he is working out is based on the ancient Greek "golden mean", a system of proportions which Doric sculptors drew from Pytha-

(Continued on page 24)



Windowalls TAKE EACH SEASON IN STRIDE

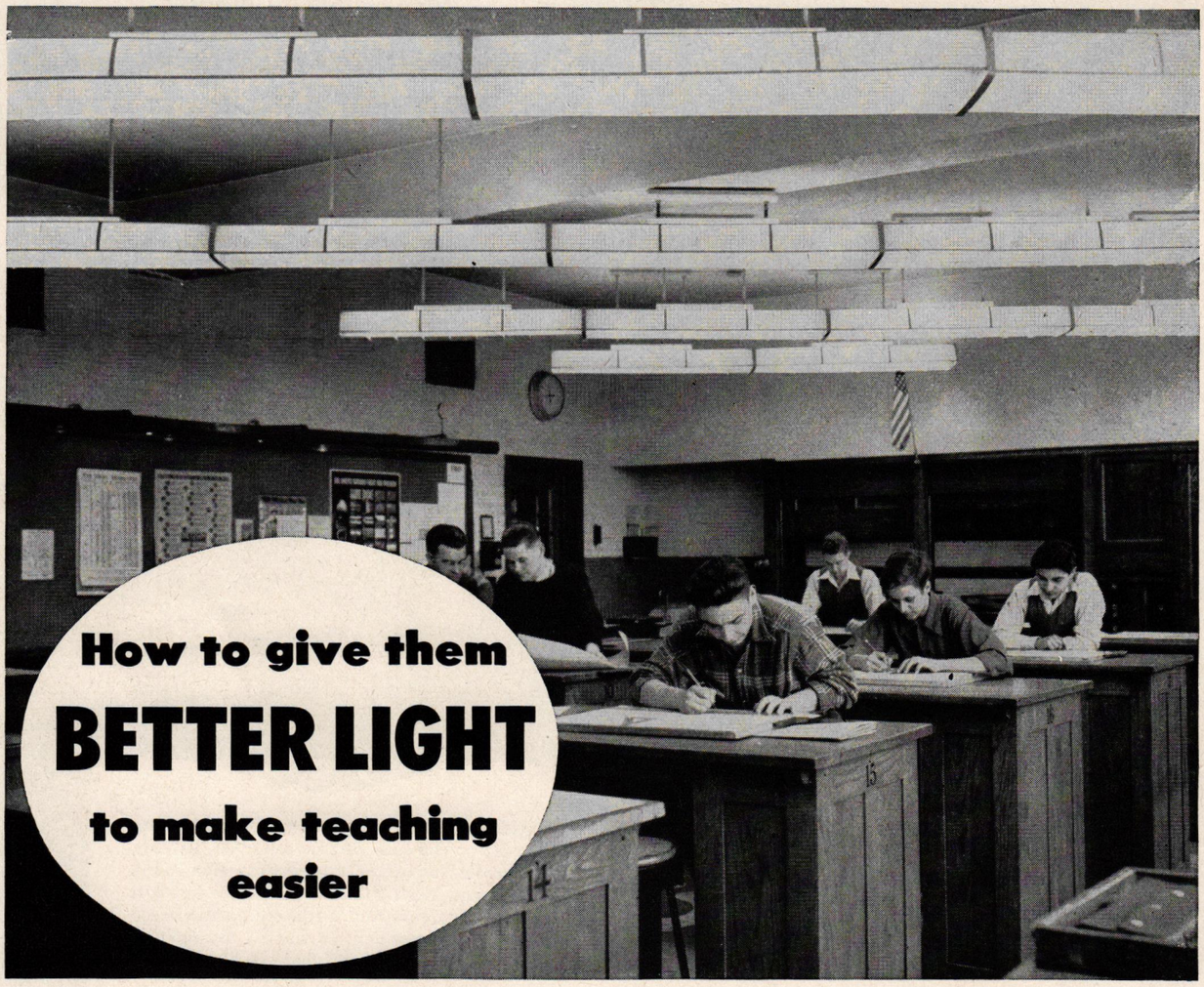
In summer or in winter, WINDOWALLS of Andersen Complete Wood Window Units perform the functions asked of them by progressive architects and by their home-owning clients.

In winter, WINDOWALLS like those above, made by combining Andersen Horizontal Gliding Window Units in a corner—are weathertight, providing a barrier against infiltration of cold air and against heat losses through radiation of low temperatures.

In summer, these windows slide from side to side to open the room to fresh, cooling breezes, or the sash can be removed, leaving the screens (as in photo below), to give 100% ventilation. With windows like these one can live both indoors and outdoors at the same time. Summer or winter there's always the view—and always controlled ventilation of a highly flexible nature.

This is the modern way to fenestrate the home—with windows that act as walls, with walls that are windows—WINDOWALLS by Andersen.

Andersen Corporation BAYPORT, MINNESOTA



How to give them BETTER LIGHT to make teaching easier

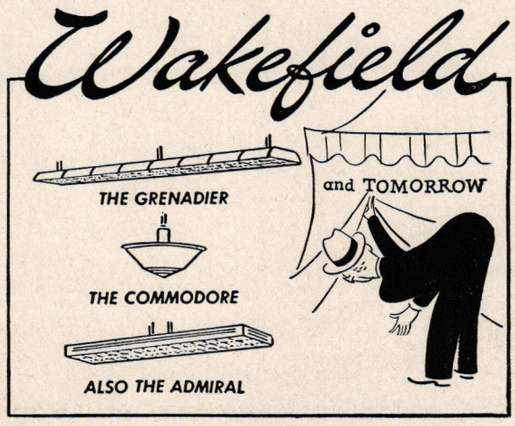
Wanted: Light for the drafting room of the Pontiac VOCATIONAL SCHOOL, Pontiac, Michigan, that would help pupils learn faster and make the close eye work of drafting easier, less strain.

Problem: Providing high level, overall lighting, with good distribution on walls and ceiling for greater eye comfort . . . despite the interference of large beams on the ceiling.

Solution: Lighting engineers of the Consumer's Power Company produced a practical and effective answer—continuous rows of Wakefield GENERALS (G-260) mounted diagonally to the drafting tables. This gives good shadow control, and the open top and plastic sides help provide comfortable light distribution, with 52 foot-candles on drafting boards. In this 26 by 40′ room with 12′ ceiling, 19 units are used, each with two 100-watt fluorescent lamps. Mounting height 10′ above the floor.

Your clients' school rooms may require different treatment, different equipment. But you can be sure that Wakefield will be glad to work with you in securing engineered lighting to fit your customers' needs. The F. W. Wakefield Brass Co., Vermilion, Ohio.

Are Your Customers Throwing Away Dollars? *Proper lighting maintenance—cleaning fixtures and walls and relamping—can double or triple their lighting. Urge them to get the light they pay for—keep lighting equipment clean!*





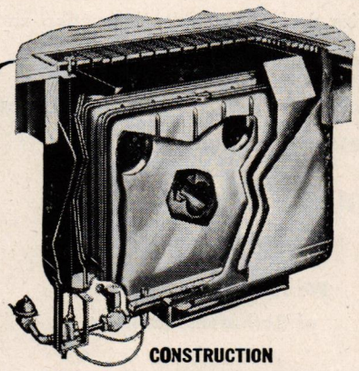
The biggest little thing in home heating and the biggest little thing in home heating SALES

Temco Floor Furnaces will be a gold mine for dealers who recognize the opportunities in the postwar heating market . . . and who see how Temco Floor Furnaces fit the need.

These compact new beauties are designed and engineered to do a big-home *automatic heating* job in smaller homes and other structures —with or without a basement—at small intitial and operating cost.

With TEMCO Floor Furnaces you offer your customers a small heating unit to be installed under the floor.

Through the neat, inconspicuous grill the TEMCO Floor Furnace sends up a flood of comfortable, even heat—automatically maintaining desired room temperature. This furnace burns all types of gas—natural, manufactured and L-P—with equal efficiency. It is fully guarded by built-in safety devices, and was among the first to gain full approval by the Engineering Laboratories of the A. G. A. An *exclusive* Temco feature is the "Whisper-Quiet" Burner, assuring truly silent operation.



CONSTRUCTION

REGISTER—brown enameled steel—82% open — removable.
"WHISPER QUIET" BURNER—assures silent flame performance — one-piece ceramic tip—operates efficiently with all fuel gases — exclusive with TEMCO.
COMBUSTION CHAMBER—die-stamped, 16-gauge steel — continuously welded and gas-tight — reinforcing ribs.
INNER JACKET—removable double casings with about ½" live air space, the best insulation known.
OUTER JACKET AND RADIATION SHIELD — zinc coated and bonderized — die-stamped bottom, curved to speed warm air circulation—convenient clean-out door.
THERMOSTATIC HEAT CONTROLS — come as package accessories.
BASO 100% SAFETY PILOT—standard equipment.

TEMCO
FLOOR FURNACES
"The Biggest Little Thing in Home Heating"

TENNESSEE ENAMEL MFG. CO.

Nashville 9, Tenn.

MAKERS OF TEMCO GAS FLOOR FURNACES AND TEMCO SPACE HEATERS

Lawson
BATHROOM CABINETS
1816 to 1946
130 YEARS OF QUALITY

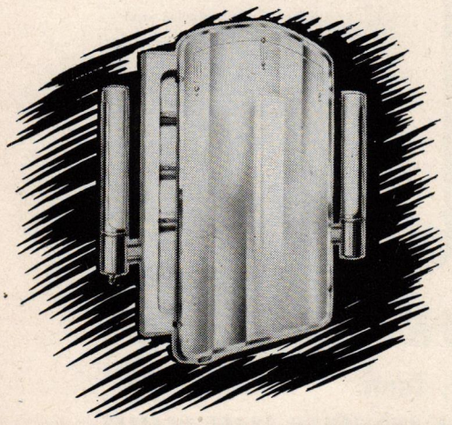
SINCE 1816, the name Lawson has stood for quality, reliability and the honest treatment of dealers and users alike. Now, as we enter our 130th year, we pledge a continuance of this same policy upon which our business was built.

And as the world's largest manufacturers of bathroom cabinets, we shall maintain our position of leadership by superior designs, sound construction and outstanding convenience features.

Watch for further announcements on the 1946 Lawson Line!

THE F. H. LAWSON CO.
Cincinnati 4, Ohio

World's Largest Builders of Bathroom Cabinets



gorean mathematical laws.

LeCorbusier had one big complaint: "With all the wonderful gadgets that practically all American housewives have, it is too bad they haven't learned to cook. The sauces are green, pink and blue, but none of them have any juice. Turkey, chicken, lamb and veal all have exactly the same taste."

RE-DO FOR THE PLAZA

Lady Mendl brings the outdoors in.

Lady Mendl, grand dame of American decorating, turned her hand to two suites at New York's plush Plaza hotel last month. After a winter at the Plaza, Lady Mendl was thoroughly out of patience with her sitting room, where the hotel's famed architect Henry Hardenbergh had put plenty of curlicues, too many closet doors, only one off-center window.

Prescribing the Swank Style that has earned her several million dollars, she painted the walls a characteristic gall green (known to her admirers as Elsie de Wolf green), added the usual undersized chairs and oversized couches, plenty of mirrors ("I can't do anything without mirrors.")

To remedy what she lamented as architect Hardenbergh's lack of a sense of balance, Lady Mendl constructed an elaborate false window effect, draped it in green chintz to match the hangings at the real window, which overlooks Central Park. One of her canons: "Decorating ought to bring the outdoors in."

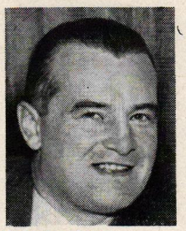
First American to call herself an "interior decorator", Lady Mendl is also credited with the introduction of chintz to American homes and as the initiator of such vogues as the zebra rug and the star mirror. One of her first professional jobs was for architect Stanford White—New York's Old Colony Club.

LABOR

OPEN DOOR FOR LABOR-SAVING

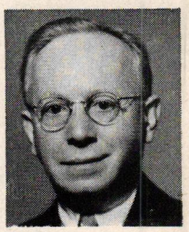
Electricians drop all restrictions on tools, new methods and materials.

New York's 10,000 electrical construction workers shook hands with contractors on the first agreement in the electrical brotherhood's history to drop all restrictions on the use of power tools and on all labor-saving methods and materials. From now on, AFL electricians will use air drills, band saws, electric hammers, machine threaders—and any new tool which may become available. This means that the electricians will be able to do about five times as much work as they have ever done before.



Van Arsdale

Local 3, International Brotherhood of Electrical Workers is also the first to take special steps to meet the housing emergency. Where necessary to speed low rent, large-scale housing projects, the union promised to nod approval for two seven-hour shifts. Members will work a seven-hour shift at regular rates, voluntarily relinquishing their contract right to overtime for the last hour.



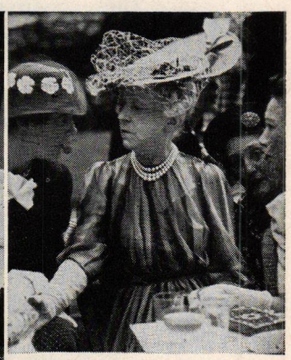
Bush

Bluff Harry Van Arsdale, business manager, offered one reason for the union's alacrity in rising to the housing emergency: Over 3,000 of its members are veterans—most of them as impatient as veterans everywhere to get a roof over their heads.

Another big reason: Local 3 can boast more worker security than many another

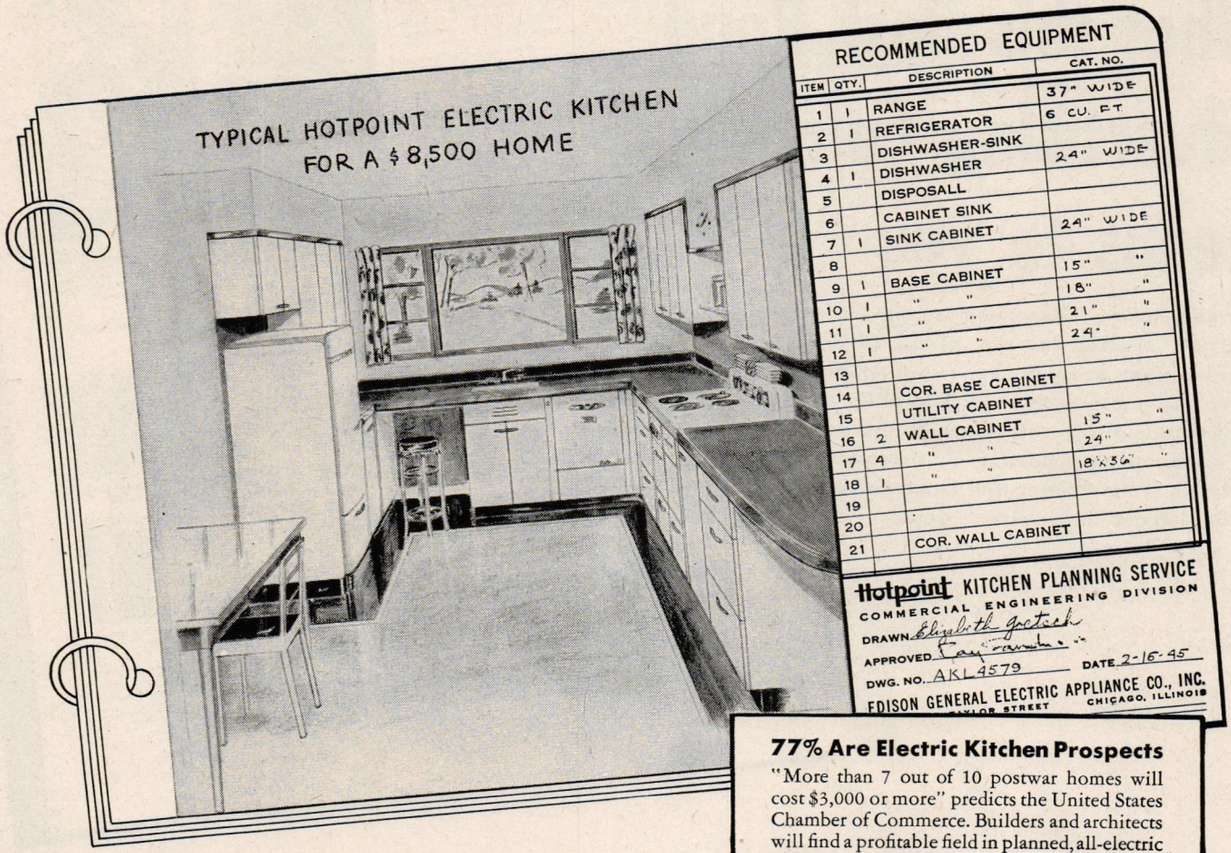
(Continued on page 28)





LADY MENDL (above) takes things in hand at the Plaza, spruces up two Grant-era suites.

Modern housewives want... and 77% can afford an ALL-ELECTRIC KITCHEN



RECOMMENDED EQUIPMENT

ITEM	QTY.	DESCRIPTION	CAT. NO.
1	1	RANGE	37" WIDE
2	1	REFRIGERATOR	6 CU. FT
3		DISHWASHER-SINK	
4	1	DISHWASHER	24" WIDE
5		DISPOSALL	
6		CABINET SINK	
7	1	SINK CABINET	24" WIDE
8			
9	1	BASE CABINET	15" "
10	1	" "	18" "
11	1	" "	21" "
12	1	" "	24" "
13			
14		COR. BASE CABINET	
15		UTILITY CABINET	
16	2	WALL CABINET	15" "
17	4	" "	24" "
18	1	" "	18"X36" "
19			
20			
21		COR. WALL CABINET	

Hotpoint KITCHEN PLANNING SERVICE
COMMERCIAL ENGINEERING DIVISION
DRAWN Elizabeth Gretsch
APPROVED [illegible]
DWG. NO. AKL 4579 DATE 2-16-45
EDISON GENERAL ELECTRIC APPLIANCE CO., INC.
TAYLOR STREET CHICAGO, ILLINOIS

77% Are Electric Kitchen Prospects

"More than 7 out of 10 postwar homes will cost $3,000 or more" predicts the United States Chamber of Commerce. Builders and architects will find a profitable field in planned, all-electric kitchens within that price range.

PLAN NOW to capitalize on your share of the boom in home building and modernization. For your convenience, Hotpoint has prepared a *Portfolio of Personalized Kitchen Plans* for homes in all income brackets. Mail coupon at right for your copy of this useful portfolio.

POWERFUL ADVERTISING BACKS ELECTRIC KITCHEN TREND:

Over a million and a half dollars spent by Hotpoint in national advertising during the war intensified interest in all-electric kitchens.

Scores of articles in leading magazines and newspapers focused attention on the electric kitchen as the modern home's No. 1 room!

Distribution of over two million booklets "Your Next Kitchen by Hotpoint" to consumers who will build or remodel.

The Hotpoint Institute
5651 West Taylor Street, Chicago 44, Illinois

Without obligation, please send me your *Portfolio of Hotpoint Personalized Kitchen Plans*. This offer available in United States, Territory of Hawaii and Alaska.

Name_____

Firm Name_____

Address_____

City_____ State_____

DEPENDABILITY ASSURED BY 40 YEARS EXPERIENCE!

HOTPOINT REGIONAL SALES OFFICES
EASTERN: 570 Lexington Ave., New York City 22, Plaza 3-9333. **SOUTHERN:** 304 Red Rock Bldg., Atlanta 3, Walnut 2959. **CENTRAL:** 1456 Merchandise Mart, Chicago 54, Superior 1174. **WESTERN:** Western Merchandise Mart, 1355 Market St., San Francisco 3, Underhill 2727.

Hotpoint ELECTRIC KITCHENS

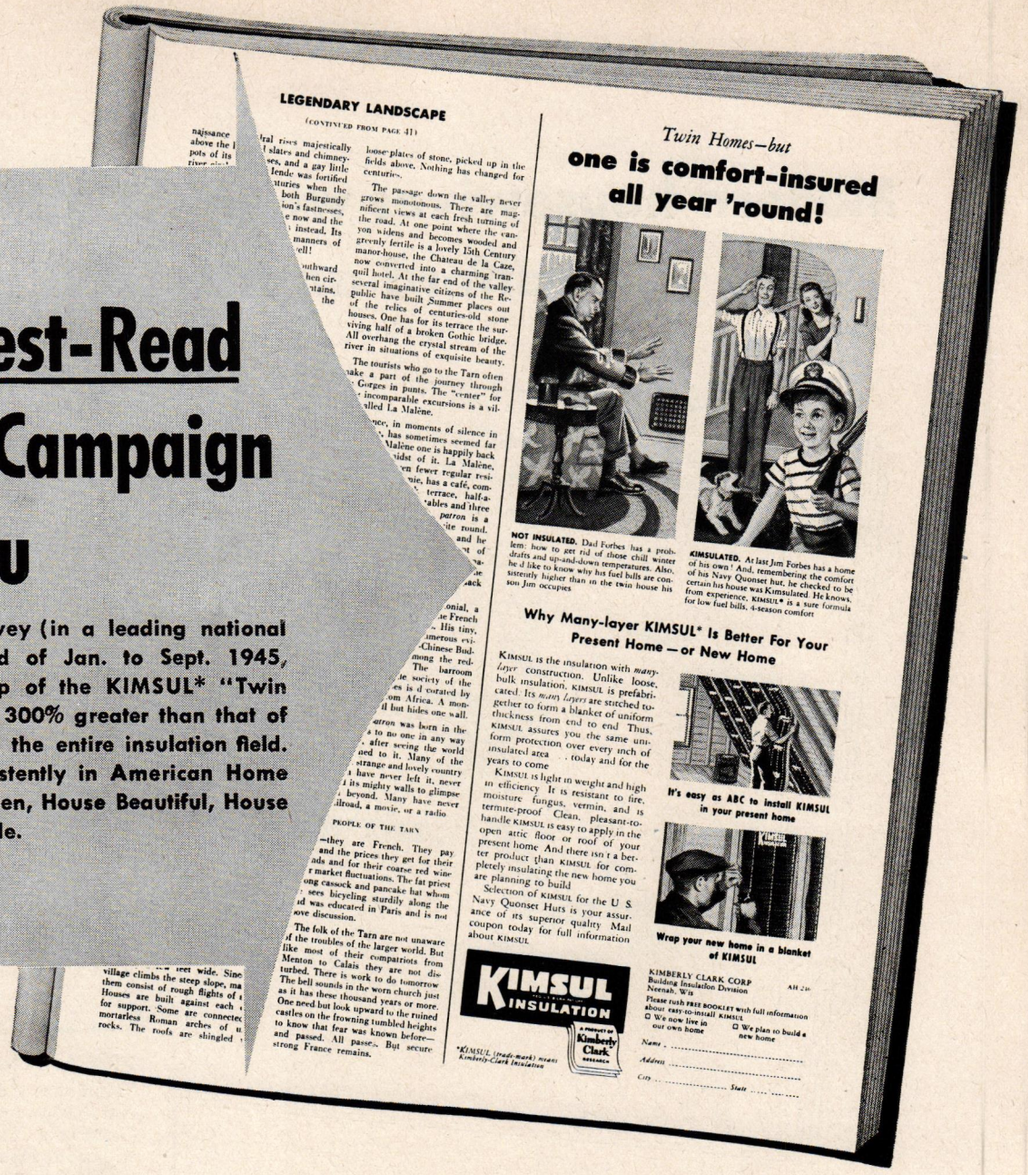
REFRIGERATORS • RANGES • WATER HEATERS • HOME FREEZERS • WASHERS AND IRONERS
CLOTHES DRYERS • DISHWASHERS • DISPOSALLS • CABINET-SINK • STEEL CABINETS

© 1946, Edison General Electric Appliance Co., Inc., Chicago

IN MOST STATES, ALL HOTPOINT KITCHEN EQUIPMENT CAN BE INCLUDED IN F. H. A. INSURED MORTGAGES

What this Best-Read Advertising Campaign means to you

According to an independent survey (in a leading national magazine, checked for the period of Jan. to Sept. 1945, inclusive), the average readership of the KIMSUL* "Twin Homes" advertisements is 22% to 300% greater than that of *all* other advertising campaigns in the entire insulation field. This campaign is appearing consistently in American Home Magazine, Better Homes and Garden, House Beautiful, House and Garden and Small Homes Guide.



The people who are reading KIMSUL advertisements are prospective buyers and builders of new houses as well as owners of existing homes. They're reading *facts* which make them want KIMSUL. Here are eight of those points of KIMSUL quality which are creating *positive acceptance* with home builders everywhere:

1. KIMSUL has high thermal and acoustical efficiency ratings. Its "k" factor is 0.27. The average coefficient of absorption for Double Thick KIMSUL is 0.67.

2. KIMSUL is resistant to fire, moisture, fungus and vermin. It is termite proof.

3. KIMSUL is permanent insulation—won't sag, shift or settle.

4. KIMSUL is easy to install—no trouble to fit around pipes or other obstructions. And no waste—pieces trimmed off may be used for calking.

5. KIMSUL is made in widths to fit in standard spaces between joists, studs or rafters. There are three thicknesses—Commercial Thick (about ½"), Standard Thick (about 1") and Double Thick (about 2").

6. KIMSUL is light in weight.

7. KIMSUL is clean, non-irritating and odorless.

8. Quality and performance considered, KIMSUL is low in cost.

KIMSUL is a compressed, flexible, blanket-type insulation with a tough, water-proof cover. Its scientifically designed many-layer construction provides uniform density, uniform thickness and complete, positive insulation coverage. From the point of view of client acceptance and client satisfaction, it will pay you to specify permanent, many-layer KIMSUL Insulation.

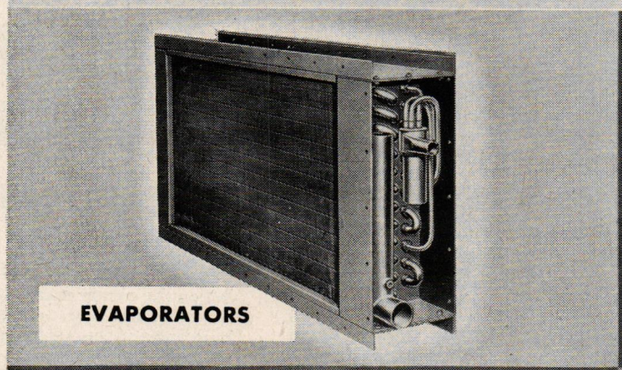
For complete technical data on KIMSUL Insulation, refer to Sweet's 1946 Catalog or write to Kimberly-Clark Corporation, Neenah, Wisconsin.

See us at booth 69, convention of the National Association of Home Builders of the United States, Stevens Hotel, Chicago, Feb. 25 to 28.

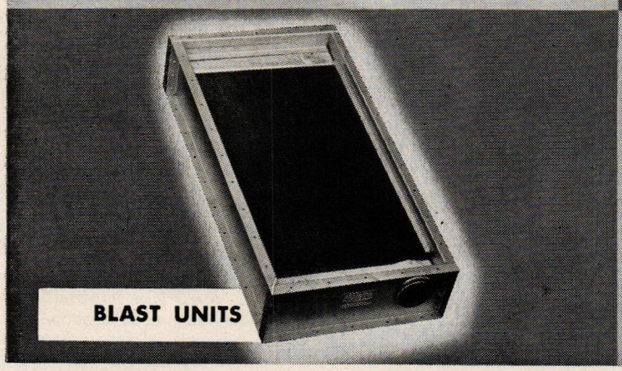
KIMSUL INSULATION
REG. U.S. & CAN. PAT. OFF.
A PRODUCT OF Kimberly Clark RESEARCH

*KIMSUL (*trade-mark*) means Kimberly-Clark Insulation*

Coils ONE AT A TIME OR BY THE CARLOAD!









● No coil job in the heating, cooling and air conditioning field is too large or too small for Young. There are versatile Young Units for every need. From architects, engineers . . . men responsible for results . . . comes testimony of the dependable performance of Young Heat Transfer Surfaces in office buildings, auditoriums, schools, theaters, stores, restaurants and other places where people gather . . . in drying rooms, paint spray booths, malt houses, dry kilns and dozens of types of commercial installations. Write for Young Coil and Evaporator catalog. No obligation.

YOUNG

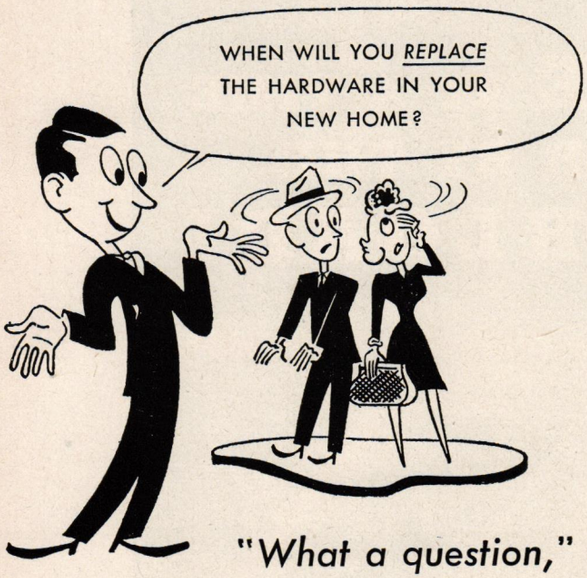
HEAT TRANSFER PRODUCTS

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

OIL COOLERS • GAS, GASOLINE, DIESEL ENGINE COOLING RADIATORS • HEAT EXCHANGERS • INTERCOOLERS • ENGINE JACKET WATER COOLERS • UNIT HEATERS • CONVECTORS • CONDENSERS • EVAPORATORS • AIR CONDITIONING UNITS • HEATING COILS • COOLING COILS • AND A COMPLETE LINE OF AIRCRAFT HEAT TRANSFER EQUIPMENT.

YOUNG RADIATOR CO., Dept. 156-B • **RACINE, WISCONSIN, U. S. A.**

HAVE YOU ASKED YOUR CLIENTS



"What a question,"
YOU SAY, . . .



"everybody thinks of hardware as a *permanent* item!"

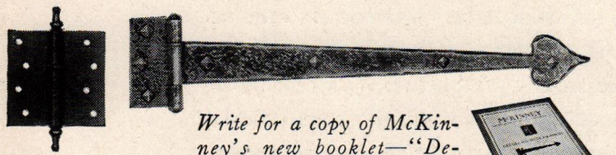
That's the point. It is a permanent, basic construction item, and it should last for the life of the building—yet many home owners will spend more for wallpaper, paint and other temporary decorating items than for the original hardware for their home . . . because, they weren't told until too late.

Your clients look to you for sound advice in all details. Call to their attention early the importance of good hardware. Ask them this question. Then specify at least 2% of the contract price for hardware. Suggest that selection be made within a week after the contract is awarded.

That will assure the owners of sufficient hardware, quality hardware and the opportunity of choosing a style that harmonizes with the architectural beauty of their home.

And that will assure you of a satisfied client, and will add to your reputation. The McKinney catalog is a handy help in suggesting authentic hardware designs.

Check your 27B File. If you find you do not have the McKinney Catalog No. 8, send for a copy.



Write for a copy of McKinney's new booklet—"Details and Data for Hinges"

McKINNEY
SINCE 1865
MANUFACTURING COMPANY
PITTSBURGH 12. PENNSYLVANIA

union still fearful to crawl out of its featherbed. Union-management agreements provide family hospitalization, disability payments, old-age benefits. A sick, disabled or retired worker can count on a minimum income of $100 a month.

Beamed A. Lincoln Bush, Belmont Electric Co. head who started 45 years ago as an apprentice and is now chairman of the trade's industry-labor board: "New York's Local 3 has always led the parade." First organized worker group to relinquish the six-hour day and work eight straight-time hours on war work, the union also permitted the use of labor-saving tools on specific war jobs.

CITIES

OVERHANGING SIGNS BANNED

New Rochelle merchants lose fight.

In the handsome suburban town of New Rochelle, N. Y., Matthew Kaplan reluctantly prepared to take down the big sign that has swung from his furniture store for the last seven years. Kaplan, joined by a bevy of Main Street merchants, had fought for three years in state courts for the privilege of keeping his sign. But last month the state's highest court unanimously agreed that the town of New Rochelle may, if it has a mind to, ban all signs projecting over public sidewalks and highways.

The New Rochelle ordinance, approved in 1943 but hamstrung by protestants' litigation, will strip about 300 overhanging signs from the town's stores. Unless the merchants decide to carry their fight to the U. S. Supreme Court (for which they have no present plans), New Rochelle will become the second town in the state to ban overhanging signs. The only other: Hempstead, L. I.

DOWLING WINS ROUND TWO

New York zoning amendment gets court disapproval in first test.

New York's new zoning regulation—which means that no new store building may be built to cover more than 65 per cent of its lot—got a major set-back in its first court test. Ruling against the city, the Appellate Division of the Supreme Court said that the amended zoning regulation—first change in the city's zoning ordinance since it was adopted in 1916—cannot legally apply to retail business (Class B) districts.

While embattled property owners, led by real estate tycoon Robert Dowling, cheered the decision, the city prepared to take its case to a higher court. Park Com-

(Continued on page 32)



DELIVER THE BUILDING *Weeks Sooner!*

No long waiting for new plaster to dry before painting walls and ceilings

When the owner wants quick delivery of his new or remodeled building and there's damp plaster to paint—use Luminall. It is a beautiful flat paint that is not damaged by dampness in new plaster. Luminall is a water-mixed paste casein paint. It has a porous film that permits moisture in new plaster to evaporate without damage.

Luminall is made in a wide range of colors—soft, lovely tints. Use wherever a flat paint is desired, from low-priced residences to biggest hotels, hospitals, and office buildings.

You'll like Luminall's speed, too—one coat covers—use a wide brush—dries in 40 minutes. Very economical.



LUMINALL



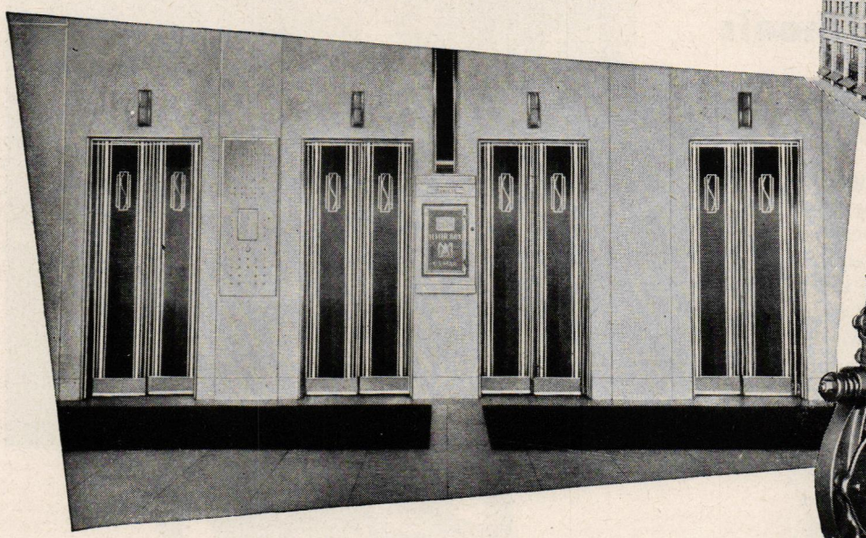
Ask for Your Copy

Send for "Painting for Light & Decoration" which gives complete data, information, and specifications on the use of Luminall in non-residential structures.

NATIONAL CHEMICAL & MFG. CO.
3612 S. May St., Chicago 9

COMPLETE *Modernization* OF ELEVATORS

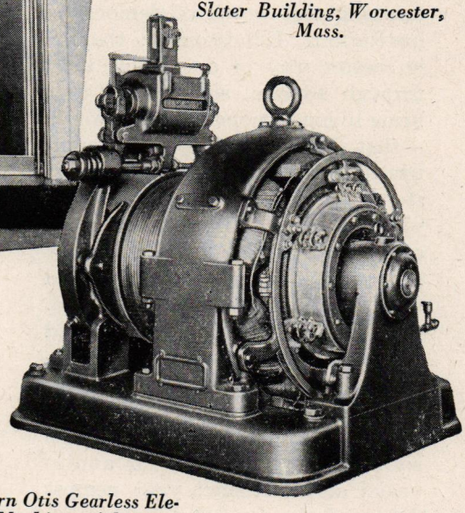
with minimum SERVICE interruption



Main floor lobby of the Slater Building showing elevator doors after modernization.



Slater Building, Worcester, Mass.



Modern Otis Gearless Elevator Machines of this type replaced old hydraulic machines.

INCREASED traffic in the Slater Building gradually exceeded the handling capacity of the original four hydraulic-plunger elevators and it became necessary to consider faster and more efficient elevators. After a complete survey and analysis by Otis, the owners decided to replace the equipment with four gearless elevators with Otis Peak Period Control.

The problem then was how to make the change with a minimum of service interruption. The solution was the erection of a new penthouse over the old hoistways and the installation of the new machines, controllers and other penthouse equipment before taking any of the old elevators out of service. Then, as the new cars and entrances were installed, the changeover to the new machines was quickly effected — with a minimum of discontinuance of elevator service.

The efficiency of the new Otis elevator service is greatly appreciated by tenants and visitors.

While the primary object of any elevator modernization project is to put or keep the building "on its feet" as a profit maker, no two cases are exactly alike. One may require little more than a "beauty treatment" — more attractive entrances or cars, or both. Another, equipment for smoother, quieter operation; or new machines to bring about greater speed — for quicker response to calls, to make more trips, — handle more passengers. Some may involve several phases.

A survey, plan and estimate covering your specific modernization needs incurs neither cost nor obligation. For the finest in vertical transportation tomorrow, call the nearest Otis Office today.

Otis ELEVATOR COMPANY
OFFICES IN ALL PRINCIPAL CITIES

16 mm. Sound Projection—a Necessity for Today's Schools



Today—in a chaotic world, there is an urgent need for teaching the meaning and worth of democratic institutions. Educators say there is no better way of doing this than through 16 mm. sound films that bring living demonstration to words—that show democracy in action in terms that young minds can understand and remember. Modern audio-visual aids are more than a means of increasing fact retention . . . they are the ideal means of creating a real understanding of social relationships.

In this task of bringing the world to the classroom, the new Amprosound 16 mm. projectors offer many advantages. No remodeling of old schools or building of new schools should omit provision for audio-visual aids. Contact your nearest Ampro dealer for full details of the new Ampro 16 mm. sound projectors.

Illustrated here is the new Amprosound Premier 10—offering superb tone quality, brilliant illumination, centralized controls—and many other exclusive war-tested features. Write for complete descriptive circular giving prices and full details.



The Army-Navy "E" has been awarded to Ampro for excellence in the production of 16 mm. motion picture projectors.

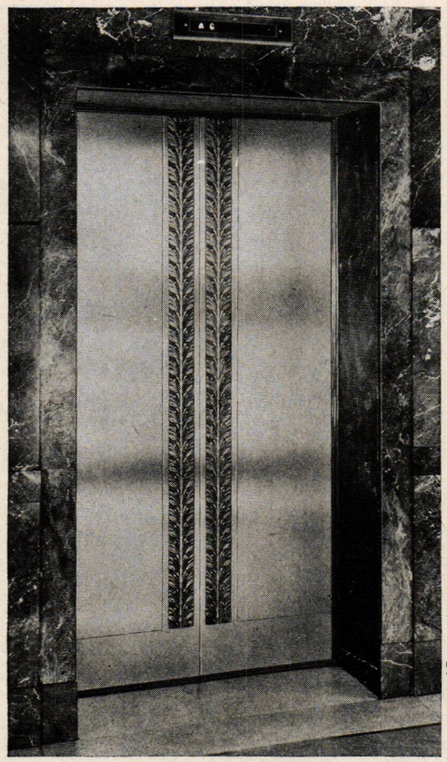
ARMY E NAVY

AMPRO CORPORATION • CHICAGO 18

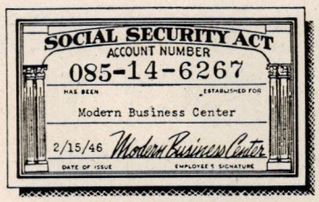
A General Precision Equipment Corporation Subsidiary

AMPRO

8 mm. silent... 16 mm. silent... 16 mm. sound-on-film... 16 mm. arc projectors... accessories



What?... SOCIAL SECURITY *for a Building?*



BUILDINGS, in some respects, are like humans—they go to "pot", get shabby and down at the heels, once vigilance is relaxed. But buildings are easier to keep young than humans. That is, if modernization and maintenance—the social security of Building—are considered an asset rather than an expense.

Best place to start social security for your building is with Lobby Modernization. This, of course, suggests Elevator Entrances by Dahlstrom—the same as those installed in Radio City and hundreds of other fine buildings from coast to coast. When you consider such a program, you can draw freely on Dahlstrom's 40-years experience without any obligation. Ask your architect, or, if you are an architect, ask us.



Illustrated above: Dahlstrom elevator entrances in the National Fire Insurance Company home office building, Hartford, Connecticut.
Architects: Eggers and Higgins, New York City.
Satin finish nickel silver fronts and trim.
Ornament is cast bronze.

DAHLSTROM

METALLIC DOOR COMPANY, JAMESTOWN, N. Y.

Branch Offices:

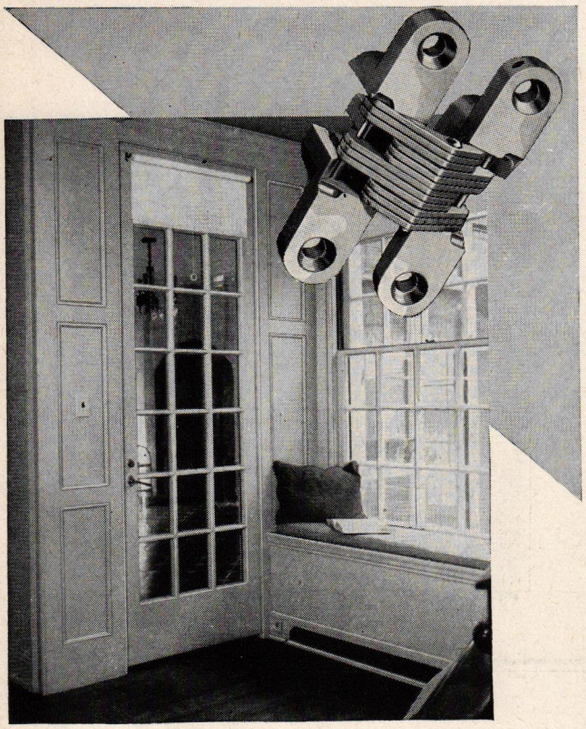
NEW YORK, CHICAGO, PHILADELPHIA, BOSTON, CLEVELAND, BUFFALO, ATLANTA, SAN FRANCISCO

Representatives in Principal Cities



STRIPING DESIGN FOLDERS

showing a wide variety of suggested designs for moderate cost installations are yours for the asking. In many cases, architects will find these folders of considerable interest. Write for copies.



Modern Hinges for The Modern Home

•This modern hinge, the SOSS INVISIBLE HINGE, eliminates unsightly, broken surfaces—and surfaces marred by protruding butts. It thereby provides greater opportunities for unusual artistic design for flush, streamlined surfaces, and far more attractive doors, cupboards and secret panels. The SOSS INVISIBLE HINGE places a hinge where it really belongs—hidden from view completely.

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SOSS Invisible HINGES

The Hallmark OF TOMORROW'S HOME

missioner Robert Moses said confidently: "The Court of Appeals will set the decision aside."

Dowling regretted that the city planned to prolong its battle and "further delay new construction." He warned: "The effect of the amendment is to freeze every old structure in the city that happens to cover more than 65 per cent of its site. Retailers won't give up the ground floor."

AID FOR MUNICIPAL BUDGETS

Tax exemptions decline in popularity. The trend-wise Tax Institute foresaw the decline of an old nostrum. Tax exemptions, the Institute said, are much less popular than they used to be. The Institute, headed by tax expert Mabel Walker and advised by such luminaries as Beardsley Ruml, Louis Brownlow, Clarence Dykstra, keeps a careful and nonpartisan finger on the pulse of municipal finance.



Tax Expert Walker

Promising balm for unbalanced municipal budgets, the Institute said that federal real estate exemptions (which blanket 24 per cent of all U. S. real estate) will shrink because:

- War-acquired government property is being sold.
- States are rapidly adopting legislation authorizing taxation of all federal property which the federal government permits to be taxed.
- The practice of in lieu payments is now firmly established and will increase.

Industrial tax exemptions may soon be on the way out. The Institute finds a "clear-cut shift of sentiment" in the "southern states which have been the chief advocates of favoring industry through tax exemptions . . . In 1939 fifteen states permitted temporary exemption of newly located plants. All but three of these states were located in the South. The Louisiana law expired in 1941 and the Georgia exemption was removed in 1945."

No new homestead tax exemptions have been enacted since 1939. "The wave of homestead exemptions, rampant a few years ago, has largely spent itself." The Institute cites a recent study of the effect of homestead exemption made by the city manager of DeLand, Fla.—"a disturbing picture of high tax rates, postponed municipal improvements, and nonprovision for sinking funds."

Only type of tax exemptions now on the rise, the Institute said, are special provisions for veterans. More legislation of this type will probably be enacted.

A Realistic Approach to

PRIVATE INVESTMENT

in

URBAN REDEVELOPMENT

Applied to East Harlem As a Blighted Area

Here is a book that should be read and held for reference by every major institutional investor. Its 92 pages contain the first completely comprehensive analysis of how private investment funds can be profitably used as a means of redeveloping large blighted areas.

This book is the result of over two years of careful research by Architect-Planner Harold Sleeper and members of the Manhattan Development Committee. The Committee is composed of representatives of leading Manhattan banks, insurance companies and architectural, housing and planning associations. Carefully, step-by-step, the study examines every possible phase of the proposed project. More than just a survey of the area involved, with its carefully explained statistical analyses and cost summaries, this report is really a textbook on how to analyze and plan for urban redevelopment.

The report's emphatic conclusion —that such housing redevelopments offer institutional investors a safe return of 6.5%, is carefully documented. Not one but three alternate plans for financing such redevelopment projects, are explained in detail. A complete bibliography of the sources consulted is of additional interest to those desirous of exploring this field.

Published For The

MANHATTAN DEVELOPMENT COMMITTEE

By The

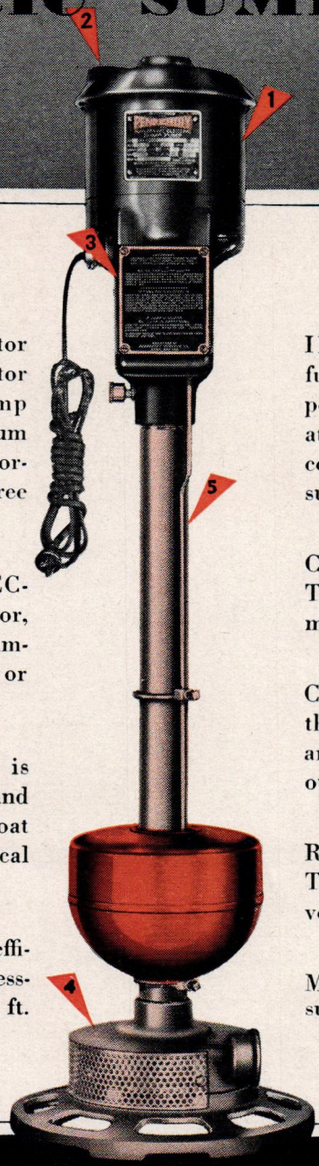
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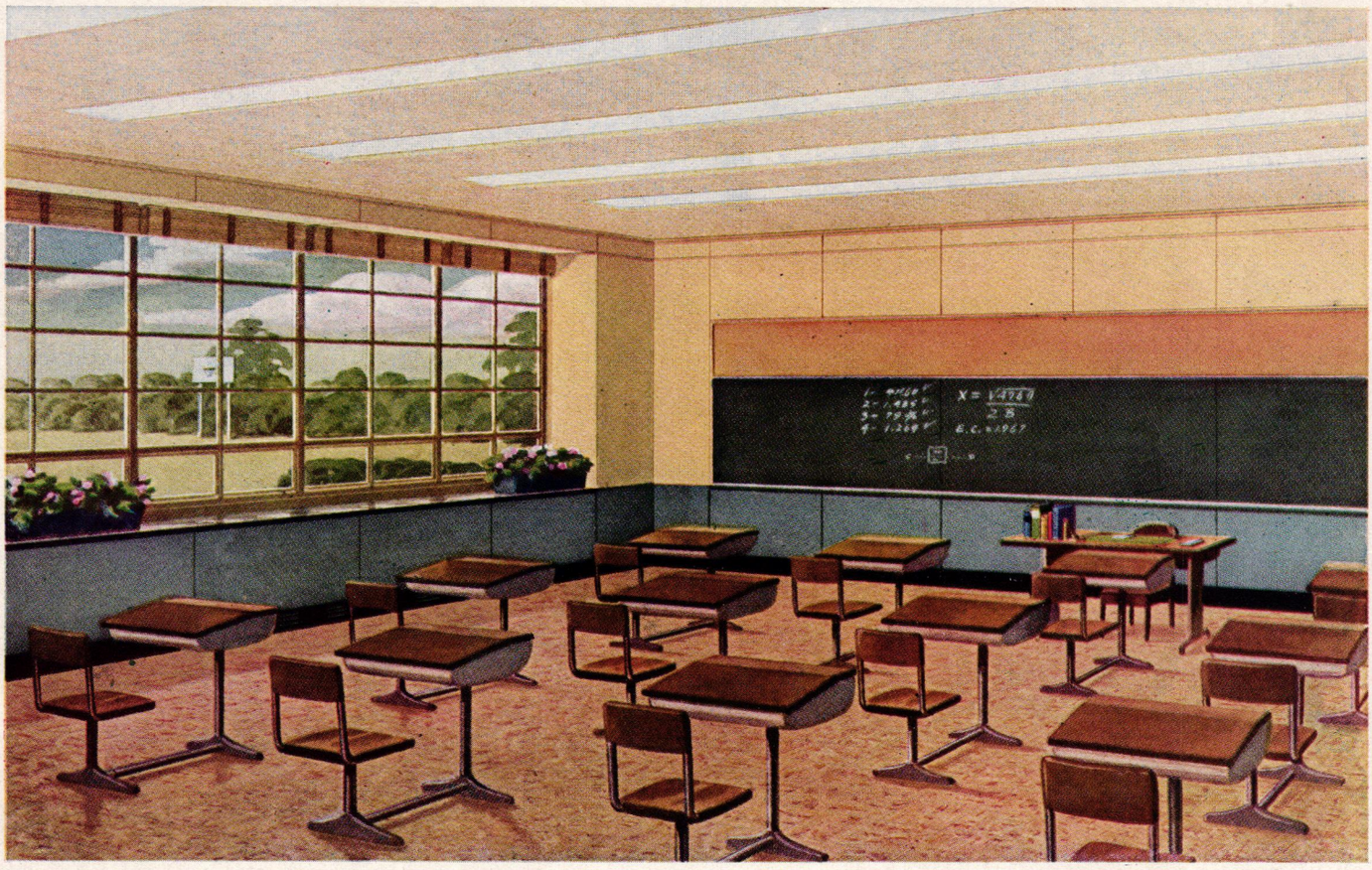
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Established in 1886

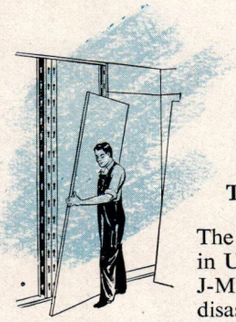
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The keystone of flexibility in Unit Construction is the J-M Transite Wall. It can be disassembled and relocated as educational needs require. One-unit rooms, for instance, can be speedily converted into two-unit rooms, or vice versa. Made of fireproof asbestos and cement, practically indestructible materials, the movable panels are used to form rigid, double-faced partitions, 4" thick. They can also be used as the interior finish of the outside walls. The Transite base is easily removable for access to wiring, etc.



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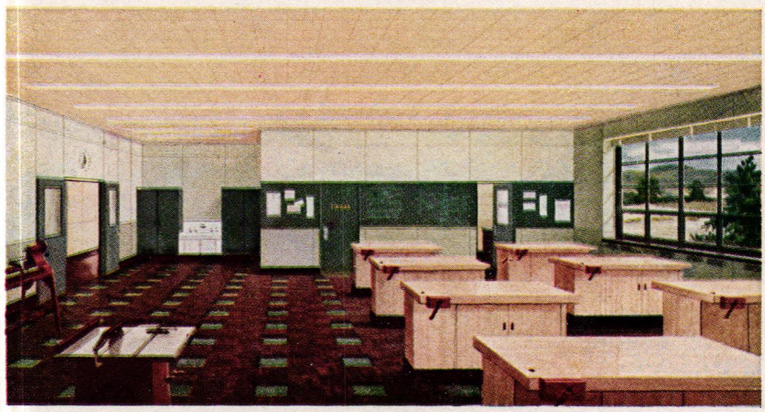
ACOUSTICAL CEILINGS

Important factor in helping to overcome the handicap of distracting noise, Johns-Manville Acoustical Ceilings are beneficial both to teacher and student alike. They give the desired degree of quiet for effective teaching, eliminate frequent causes of nerve strain, and are proved aids to concentration. An exclusive Johns-Manville patented construction system permits interchangeability of flush-type fluorescent lighting and acoustical ceiling units which are readily demountable.

schoolrooms apart...

and rearrange them to meet changing needs!





These quiet, attractive, modern schoolrooms are typical of the Johns-Manville Unit System. They are structurally flexible, yet have all the qualities of permanent and solid construction. The clean-cut, projection-free Transite Walls may be easily cleaned by a simple washing—an advantage that makes a big difference in the maintenance budget. Notice the noise-absorbing, demountable Acoustical Ceilings with fluorescent lighting, and the colorful, resilient Asphalt Tile Floors.

Think of it! Whole school interiors can now be *completely flexible . . . at low cost!*

WHATEVER the educational needs of a community may become, Johns-Manville Unit Construction allows easy and economical rearrangement of school interiors to meet new requirements.

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2. **Acoustical Ceilings . . .** reduce distracting noise. Demountable units can be taken down and relocated as desired.
3. **Colorful, Resilient Floors . . .** quiet underfoot. Small units permit easy extension of floor pattern.

All these constituent parts are durably built to last as an *integral* part of the building . . . and, being easy to clean, hard to mar, they make possible substantial economies in maintenance.

Write for further information and details on this important advance in school construction. Johns-Manville, 22 E. 40th St., New York 16, N. Y.

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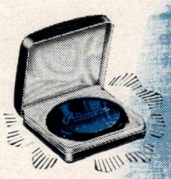
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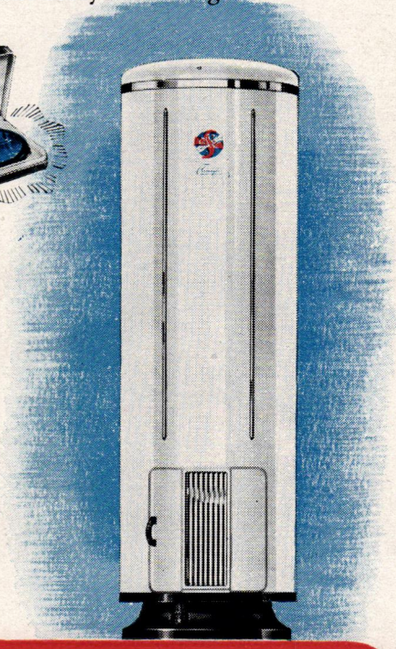
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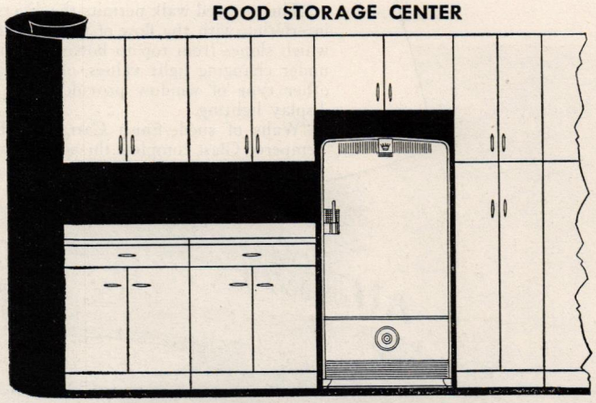
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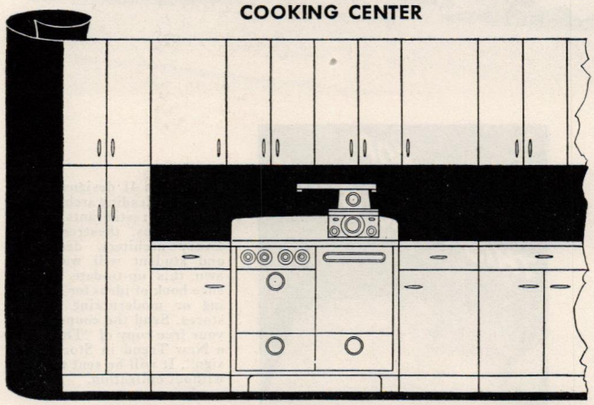
Frigidaire Kitchen Cabinets are made in standard sizes and models—and may be assembled into combinations to fit any kitchen, any work method.

FOOD STORAGE CENTER



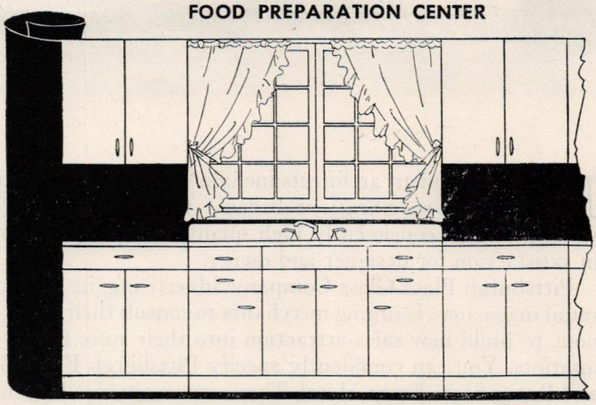
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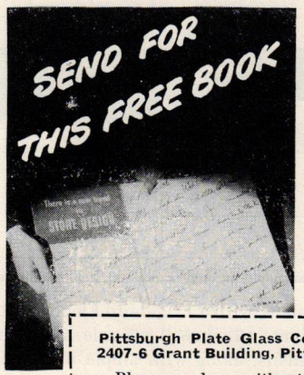
Amedeo Leone



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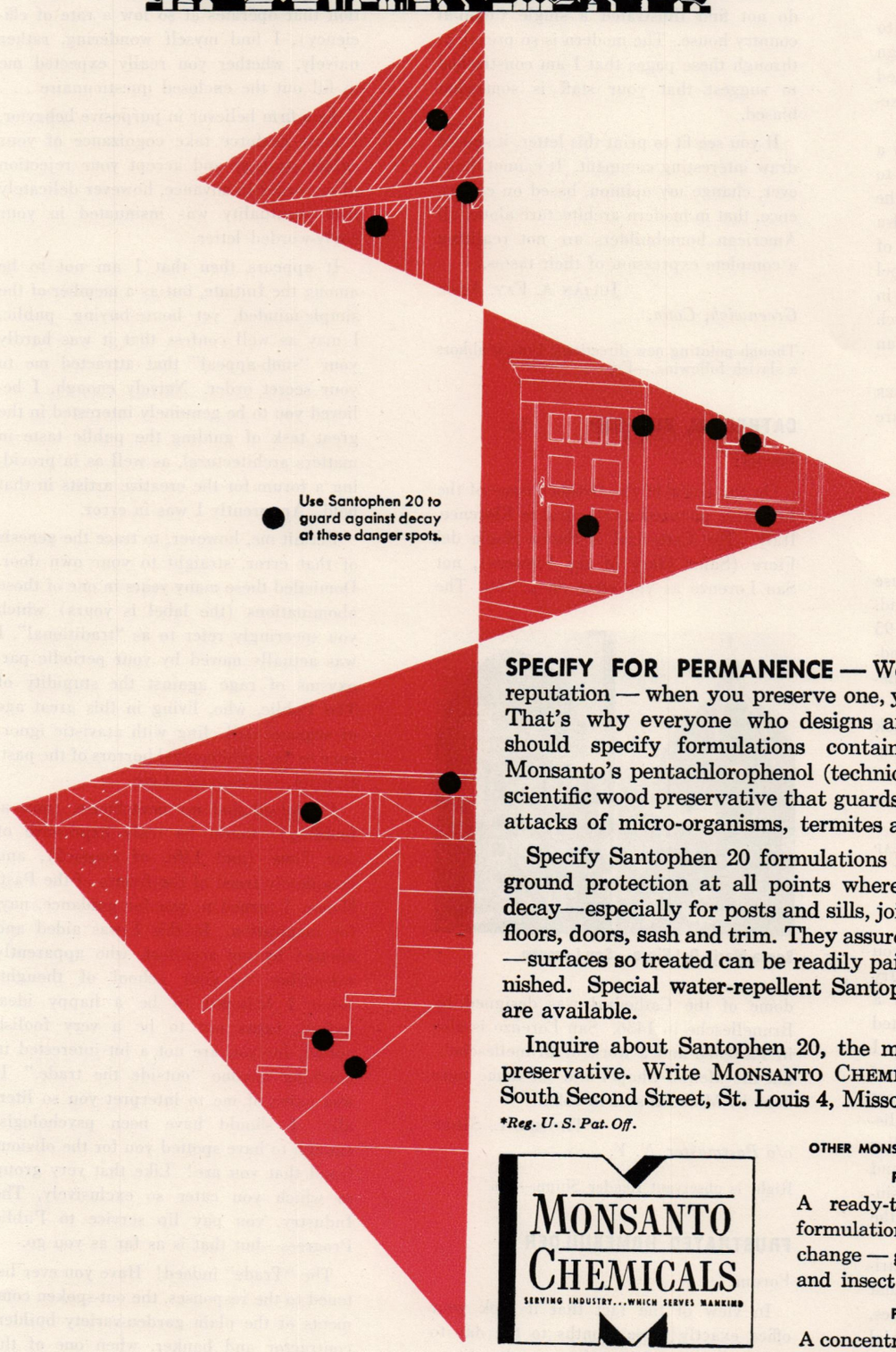
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LETTERS

Traditionalia . . . Thumbtacks in the draftsman's soul . . . Housing Crisis . . . Letter from Brazil.

ORCHIDS FROM OKLAHOMA

Forum:

Congratulations to the FORUM and to Bruce Goff for the publication and design respectively of one of the most distinguished pieces of ecclesiastical architecture executed in many a day.

Goff's work on this building confirms a statement that I have made many times to Oklahomans in the past few years: that the Boston Avenue Methodist Church in Tulsa was a significant step in the progress of modern architecture. His Seabee chapel expresses an awareness of the progress in architecture since he did the Tulsa church in 1928, and indicates the maturity of an accomplished designer.

HENRY L. KAMPHOEFNER
Professor of Architecture
University of Oklahoma
Norman, Okla.

THWARTED SUBSCRIBERS

Forum:

My policy is to find out the kind of house the customer wants and to build that kind. Your recent survey showed that about 95 per cent of the customers do *not* want modernistic houses. Yet your magazine is devoted 100 per cent to just that.

It takes but a few minutes to look through your magazine for there is nothing there I want to see. I am fed up with it. Why don't you feature the kind of houses customers want to buy?

WALTER H. DUNLAP
Washington, D. C.

Forum:

. . . In my opinion, the importance you give to modern architecture for country houses is greatly over-emphasized. In a private practice of fourteen years, devoted largely to the country house category, I have generally served a clientele of average good taste or better, building houses not only in this forward-looking and discriminating community but also in similar locales in New York, New Jersey and Pennsylvania. Never have I received a single request for a country home in the "Modern" style.

The reasons for this situation are various, but it does support my impression that much of the American public *still* desires, respects and loves our own period Colonial architecture, or American adaptations of the traditional types from other lands.

Glancing over your November and December issues, as perhaps typical ones, I do not find illustrated a single Colonial country house. The modern is so prevalent through these pages that I am constrained to suggest that your staff is somewhat biased.

If you see fit to print this letter, it should draw interesting comment. It cannot, however, change my opinion, based on experience, that in modern architecture alone, all American homebuilders are not realizing a complete expression of their tastes.

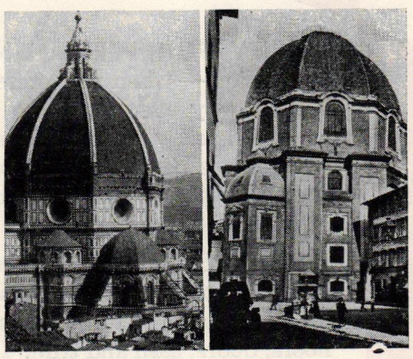
JULIAN A. FAY, Arch.
Greenwich, Conn.

Though pointing new directions, FORUM abhors a slavish following.—ED.

CATHEDRAL BLUNDER

Forum:

On the cover of the October issue of the FORUM is pictured a cathedral in Florence, Italy. The Cathedral is Santa Maria del Fiore (Saint Mary of the Flowers), not San Lorenzo as you state on p. 150. The



Santa Maria Del Fiore San Lorenzo

dome of the Cathedral was designed by Brunellesche in 1436. San Lorenzo is also in Florence and a work of Brunellesche's, but the Medici Chapel and the dome were done by Michelangelo in 1520.

THOMAS L. SHIPP
c/o Postmaster, N. Y.

Right is observant Reader Shipp.—ED.

FRUSTRATED HOMEBUILDER

Forum:

In view of the fact that it took your office exactly three months to the day to acknowledge receipt of my order for a subscription to your exalted publication (although my check was deposited with astounding promptitude for an organization that operates at so low a rate of efficiency), I find myself wondering, rather naively, whether you really expected me to fill out the enclosed questionnaire . . .

As a firm believer in purposive behavior, I must perforce take cognizance of your subtle strategy and accept your rejection of my order in advance, however delicately that eventuality was insinuated in your coyly-worded letter.

It appears then that I am not to be among the Initiate, but as a member of the simple-minded, yet house-buying, public, I may as well confess that it was hardly your "snob-appeal" that attracted me to your secret order. Naively enough, I believed you to be genuinely interested in the great task of guiding the public taste in matters architectural, as well as in providing a forum for the creative artists in that field. Apparently I was in error.

Permit me, however, to trace the genesis of that error, straight to your own door. Domiciled these many years in one of those abominations (the label is yours) which you sneeringly refer to as "traditional", I was actually moved by your periodic paroxysms of rage against the stupidity of The Public, who, living in this great age of science, still cling with atavistic ignorance to the architectural horrors of the past. In brief, you convinced me.

I resolved that my next house, (now a-budding), would be truly expressive of our Time (and Life, of course!), and completely freed of the fetters of the Past. Hence, I turned to you for guidance, nay, for inspiration. In this I was aided and abetted by my architect, who apparently subscribes to your school of thought. What I believed to be a happy idea, indeed, turns out to be a very foolish notion, for you are not a bit interested in reaching anyone "outside the trade." It was naive of me to interpret you so literally. I should have been psychologist enough to have spotted you for the obvious fraud that you are! Like that very group to which you cater so exclusively, The Industry, you pay lip service to Public Progress—but that is as far as you go.

The "Trade" indeed! Have you ever listened to the responses, the out-spoken comments of the plain garden-variety builder, contractor and banker, when one of the

(Continued on page 42)



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Heart of the full-comfort wiring system is the Multi-breaker. It eliminates fuses and the dreaded job of changing them. It provides protection against dangerous overloads . . . and a safe, simple, centralized dis-connect for all circuits.

Ask your electrical contractor to quote both ways—with the Multi-breaker, and with fusible equipment. You'll find that the Multi-breaker costs little or no more . . . and gives extra convenience and protection to your clients.



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How to unite inside and outside in one decorative ensemble.
How to make your store more inviting.

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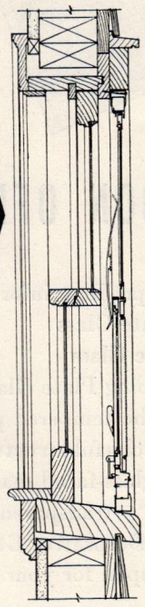
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COMBINATION WINDOWS

designs, gloriously functional, simple and spacious, is presented to their jaundiced eyes for approval? Have you? And these are the gentlemen, the Elite, for whom your sacred writings are reserved! They may advertise in your pages, but they shun your ideas with horror. You haven't made much progress in that quarter. Obviously, it is not the poor benighted public who stand in the path of Architectural Progress, but these same gentlemen "in the trade." As long as you maintain this "Public Be Damned" attitude, and reserve your tender solicitude for those who, motivated by selfish interest, slavishly stick to the past, so long will you fail to find a responsive public. If *you* wash your hands of your obvious duty to enlighten, educate and create a demand, why rail against the public? I pause for a reply.

HELEN D. INCE

New York, N. Y.

Edited for and limited to Building Professionals, over-shoulder reading of FORUM is proposed for avid laymen. Sorry!—ED.

MECHANICAL MEN

Forum:

I believe the "architect-draftsman" situation must be abolished by law for the best interests of the draftsman and also for the client, since the architect would devote a much closer supervision to his work if he were actually doing it himself.

By the "architect-draftsman" situation is meant the one in which the architect is supposedly the designer and the draftsman is merely a *tool* (a drafting machine) to express the architect's ideas.

A situation of this nature is un-American, and draftsmen of talent who are experts themselves find this an unbearable situation. A situation that is conducive to nervous breakdowns in the more talented, as it is much more difficult for them to make so degrading an adjustment than for those not talented or expert at all. Of course, it is economic necessity which makes them take it, if they take it at all. In my case, this sort of situation cannot be tolerated.

Many of these offices don't want men. They want mice.

Therefore a law must be passed whereby an architect can be commissioned *to do no more work than he himself can do by himself.*

In large building work which entails too much for one man to do, several architects should be commissioned, each to be the equal of the other in sharing the authority and responsibility of completing plans personally (not "sub-contracting" them to slave draftsmen.)

These laws must be passed.

The educators are committing a crime by training our young men to become architects, knowing right well that a very small percentage ever will have their own offices under present conditions. And they know that the registration laws require them to submit to this "architect-draftsman" situation. Therefore, the state registration law itself must be changed.

The educators must, to absolve their crime, press legislation of this sort greatly or limit their enrollment.

ALBERT GERTH METTER

Chicago, Ill.

FORUM heartily endorses the idea of more men and fewer mice; questions the feasibility of Reader Metter's proposal in a world dedicated to ever-increasing division of labor.—ED.

ONE MAN'S POISON

Forum:

I wish that you would drop your policy of having the FORUM open flat. At least hold it in abeyance until you can get the wire bindings that you had before the war.

The present binding, or rather lack of binding, is irritating, annoying, frustrating, and a damn nuisance. The last three issues that I have received have literally fallen apart when they were taken out of their wrappers. In fact, the December issue lost three pages in transit.

I like to keep my issues of the FORUM, but unless I have them specially bound, it's impossible, as more pages break away from their moorings every time I open the magazine . . .

PIRIE BROWN

Pasadena, Calif.

Forum:

. . . Let me compliment you on the type of binding you have been using. It is the most practical that you have ever had. It enables one to remove with little trouble an article or series of plates when desirable, and leave the rest of the magazine intact. In this respect it is much better than the spiral binding or stapling . . .

R. R. FLING, Arch.

Columbus, Ohio

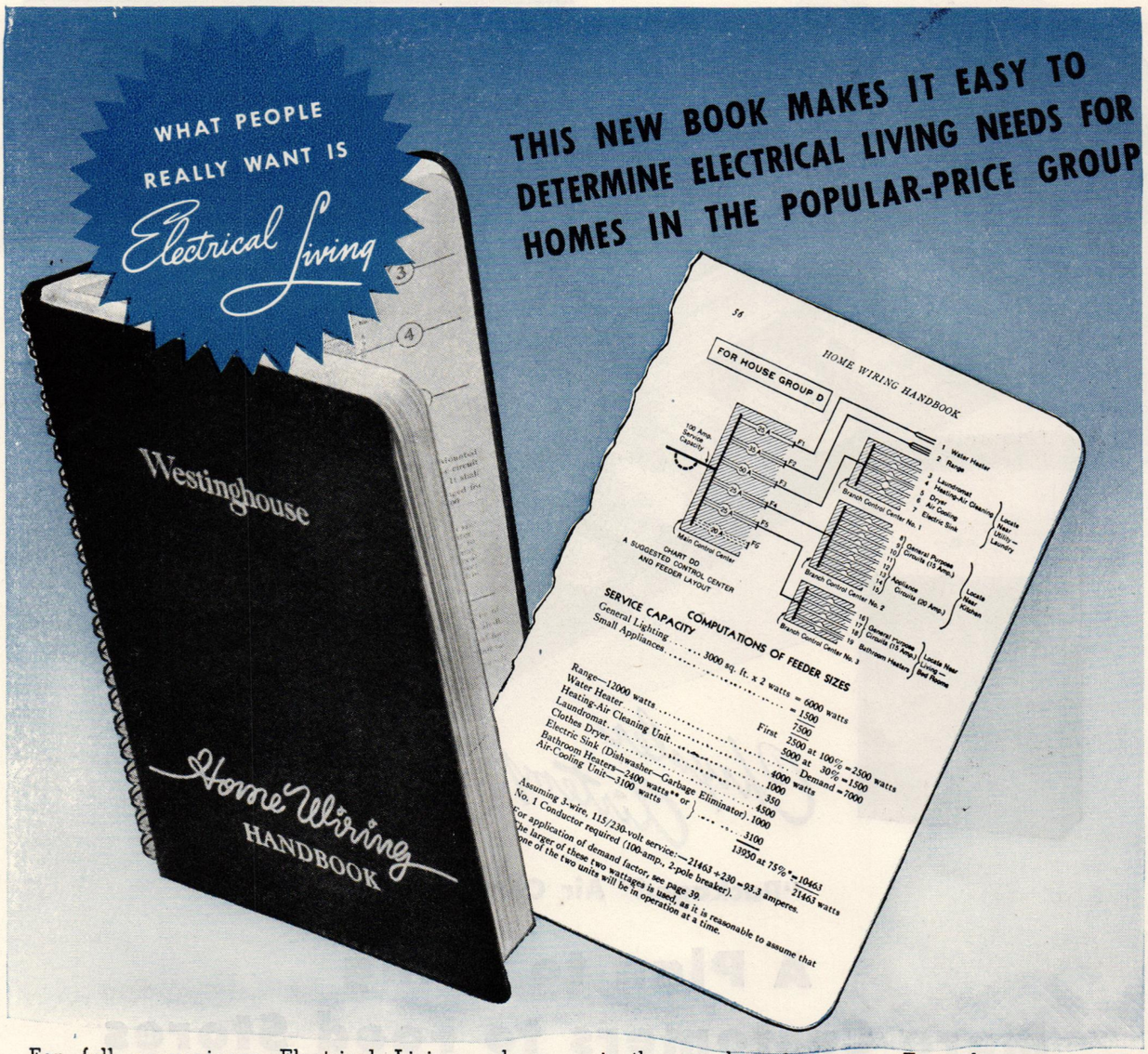
Forum:

. . . I should like to get the story on the type of binding which you are using in your book—as to whether you have exclusive rights on it and something about the process itself. I am very much impressed with the binding and should like to know more about it.

ADOLPH ENSRUD

Chicago, Ill.

(Continued on page 46)



For full convenience Electrical Living, where should control centers for a house be located? What size feeders should you install? What is the minimum number and size of circuit breakers to use?

Complete data is contained in the new Home Wiring Handbook to enable you to design the most modern and efficient electrical installation for homes in the popular-price group. Examples are given to make easy the entire computation of distribution systems.

Throughout this 120-page book you will find valuable data assembled to save time and assure a well-engineered installation. Costs one dollar. Send with coupon below.

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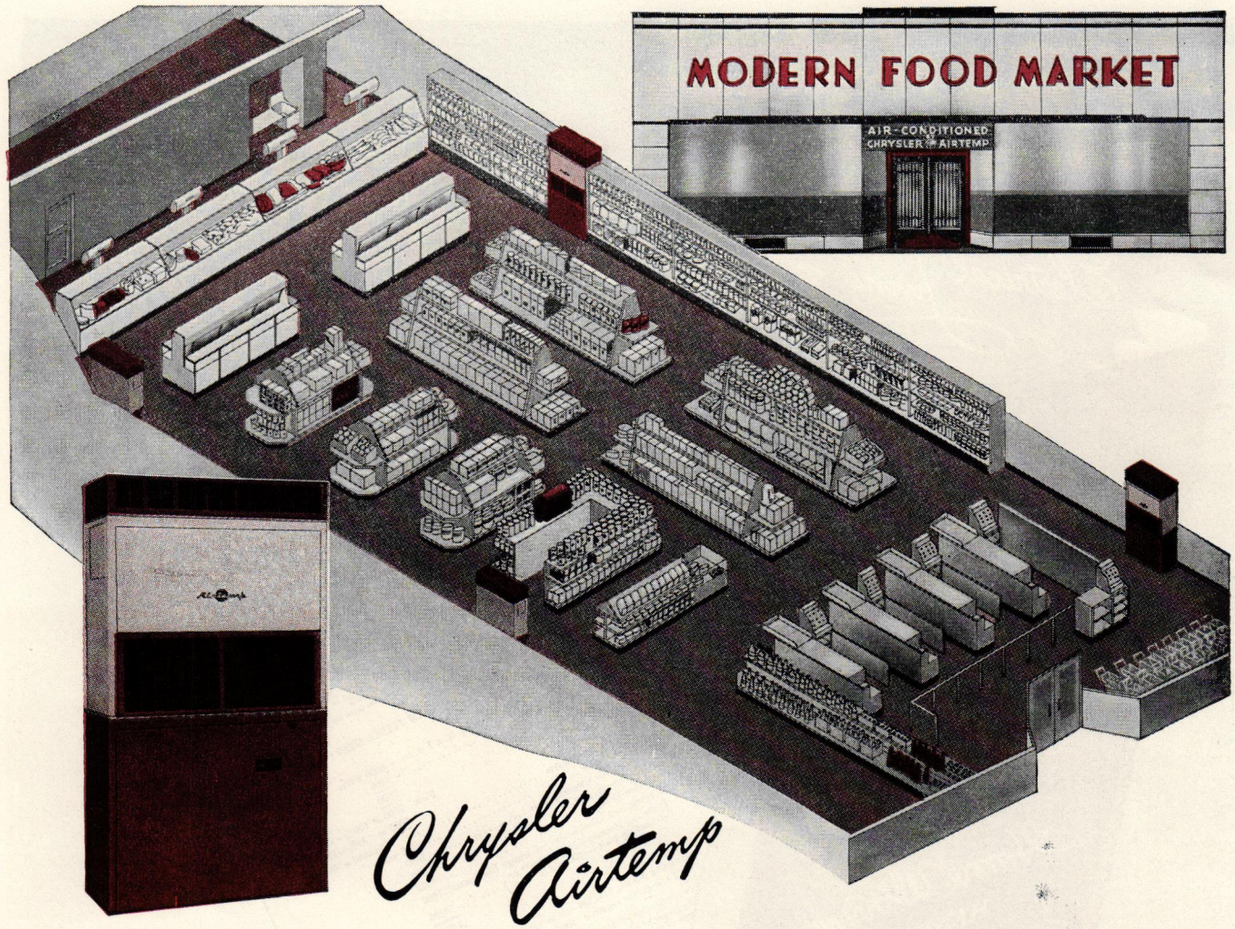
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"Packaged" Air Conditioners

A Plan to Bring More Customers to Food Stores

For a modern super store like the one above, or a small shop—"Packaged" Air Conditioners, pioneered by Chrysler Airtemp, are a solid investment for increasing patronage and profits. Compact, easy to install, they fit readily into any store plan. Their time-tested dependability has brought coast-to-coast acceptance by business and professional men.

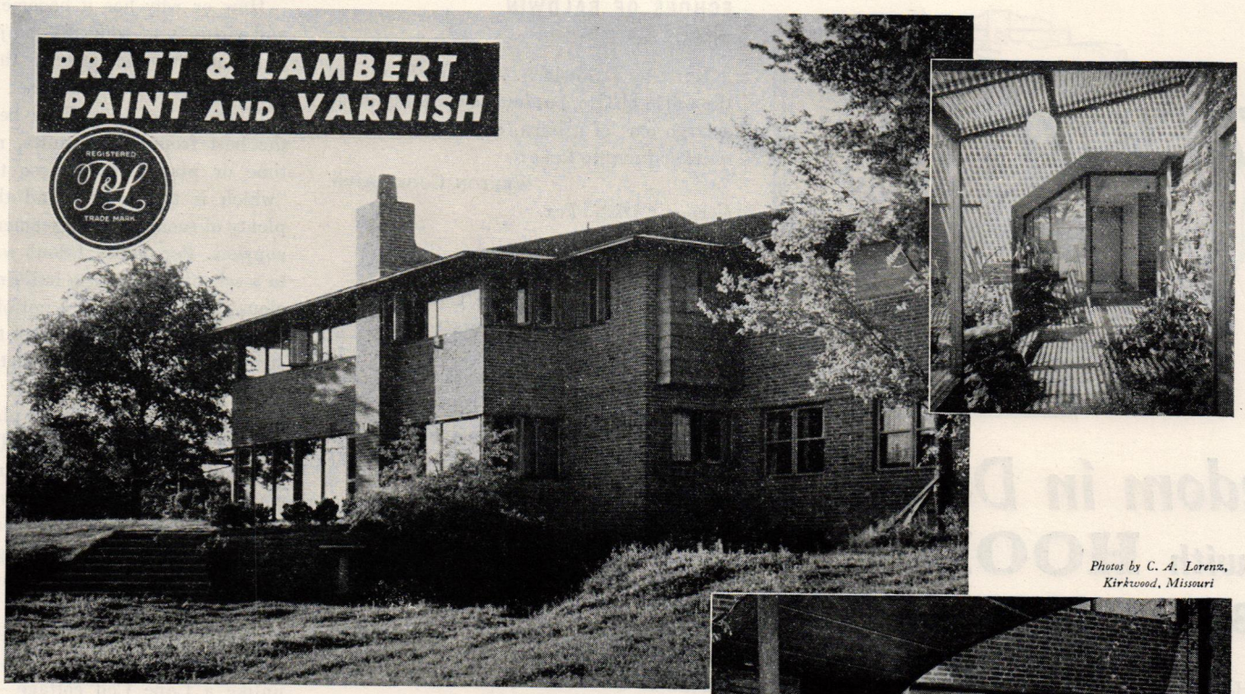
"Packaged" Air Conditioners can be installed singly or in multiple, and can be converted into year 'round air conditioners by the addition of a heating coil. Because they are completely packaged, they come ready to go to work and immediately begin paying for themselves. The sealed Radial Compressor is engineered for long, trouble-free life; noted for quiet, low-cost operation and exceptionally low upkeep.

It's good business for any architect to include this modern, simplified form of air conditioning in plans for new stores, shops, clinics, doctor's or dentist's offices, hotels, or even for new homes—the Chrysler Airtemp "Packaged" Air Conditioner also operates in combination with a warm air central heating system. Airtemp Division, Chrysler Corp., Dayton 1, O. In Canada, Therm-O-Rite Products, Ltd., Toronto.

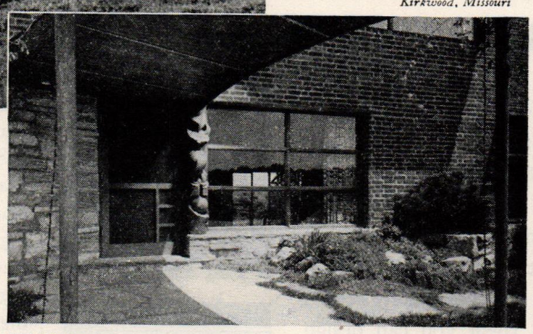
Invest in Your Future—Buy U. S. Savings Bonds! "REMEMBER THURSDAY NIGHT! The music of Andre Kostelanetz and the musical world's most popular stars—Thursday, CBS, 9:00 P.M., E.S.T.

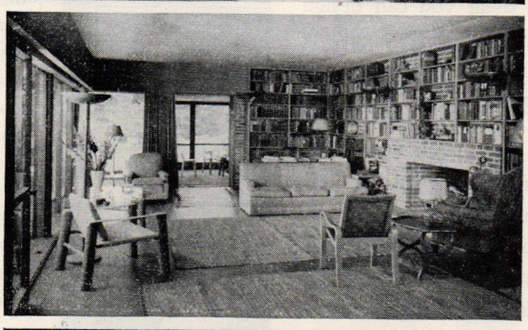
CHRYSLER AIRTEMP

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Photos by C. A. Lorenz, Kirkwood, Missouri







HOME OF DR. EVARTS A. GRAHAM, ST. LOUIS COUNTY, MO.
HARRIS ARMSTRONG, Architect, St. Louis, Mo.

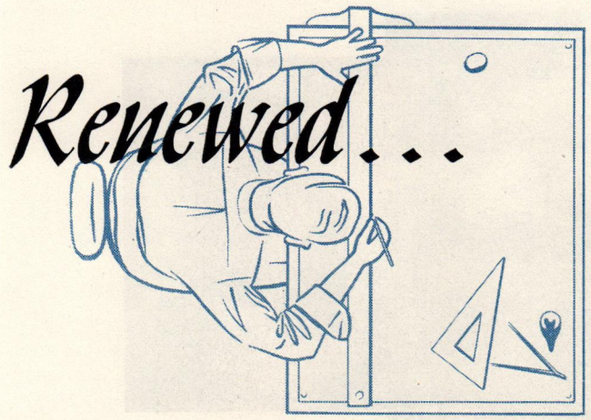
THIS functional, modern home occupies a rural site with sweeping views of the Missouri and Mississippi Rivers. The owners, a surgeon and his scientist wife, are ardent gardeners, as suggested by the conservatory adjoining the front hall, and the gardens around the house.

Interesting, primitive motifs appear in the hand-hewn supports of the entrance canopy, in the totem-pole-like carving by Enrique Alferez, and in the lashed log corner posts of the second floor windows.

"We are much pleased with the external appearance," comments the owner. "A common remark is that the house seems to fit the landscape as if it belonged there." The use of Pratt & Lambert Paint and Varnish has contributed much to the decoration and preservation of this fine home.

Now that planning and building are again being resumed, the Pratt & Lambert Architectural Service Department offers up-to-the-minute specifications for the application of the most recent paint discoveries. Contact the office nearest you for prompt, time-saving co-operation.

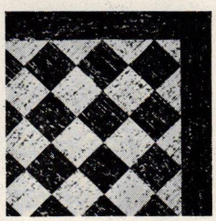
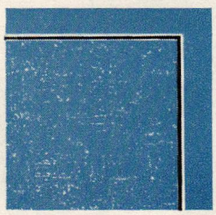
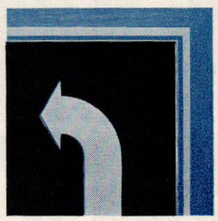
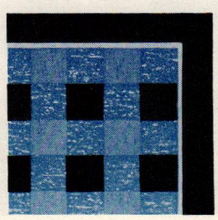
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Now that Hood Rubber Tile Flooring is again in production, you can design quality floors to fit the individuality of the interior. Versatile patterns and harmonious Hood colors permit warm, visually interesting floors or cool completely restful ones. With them you can design purely functional floors for guiding or dividing traffic; floors to create illusions of greater or less floor and room space.

If lower initial costs are desired, Hood Asphalt Tile Flooring, the great companion floor, is offered. Both possess versatility, limited only by the imagination of the Architect, Designer or Decorator. Both incorporate the outstanding quality, comfort and satisfaction for which Hood Products have been famous for more than half a century. See Sweet's or send for the New Hood Catalogs today.

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A DIVISION OF
B.F. Goodrich
WATERTOWN, MASS.

RUBBER & ASPHALT TILE FLOORING

LETTERS

ECHOES OF BALDWIN

Forum:

Re: Guy Baldwin . . . He may never set the world on fire, but he has certainly made a large part of it burn. Did you ever see a quicker jump to fame?

WELTON COOK, Arch.
Corpus Christi, Tex.

Forum:

I guess it's not as late as I had thought! For years the FORUM's glass-plated, indoors-outdoors, 3-in-1 plans have led me to believe that ARCHITECTURE was here to stay. I thought that ARCHITECTURE vs. ye olde quaintsy-waintsy had been fought out and settled about the same time as the Scopes trial.

Then one alleged Guy H. (King Canute) Baldwin, pens a peevish—but adroit—note which you publish and quicker than you can say "Contemporary Functionalism" your apparently established and respectable modernists rush from their corners by dozens to flail what is obviously a straw man, more pathetic than absurd.

Shame on you, Wurster, Lescaze, Shaw, Marx, Flint, Skidmore, and all the rest! You're supposed to be big boys now and big boys don't jump when the bogeyman shouts "Boo!" They go on about their dignified business so sure of themselves they need pay no attention.

As a matter of fact, I seriously doubt there is any such person as Guy H. Baldwin. I strongly suspect he is the creation of Howard Myers' mid-summer imagination, conjured up as a stunt to build circulation and stimulate reader interest.

As such he certainly has been effective, if only to demonstrate this—that our faith is not yet mature or firm enough for us to ignore the jibes of one querulous and quite unimportant disbeliever.

TALBOT WEGG
Bellevue, Wash.

Forum:

1. "Tomorrow, Today will be Yesterday."
2. "*Newsworthiness* in architecture and building is *rarely* found in warmed-over versions of period designs which were news 200 or more years ago.—ED." (FORUM, Aug. '45, p. 40).
3. *Noteworthiness* in architecture and building is *rarely* found in warmed--over versions of novel designs which were *newsworthy* two months or more ago. (Paraphrase of the above.)
4. Notable architecture is *rarely* found! Period.

Guy H. Baldwin seems to have stabbed at a spot where it was tender for they certainly jumped and squawked.

How or why has it become more noble and virtuous to copy the "unjelled" of recent antiquity instead of the "dry and dusty" of an earlier vintage?

Might it not be a little better to copy the best from *all* antiquity, regardless of time or place? Of course the catch is, "which is the best?", and there will be plenty of room for disagreement among the copyists. Personally, I don't want to belong to a school that holds a building to be atrocious if its elements are not obtained from a dusty book—or to a school that damns a structure for having any detail out of a dusty book.

Suppose in our design we plan a building of any size or shape we feel will best suit the needs of the client, using the most suitable materials the market affords, with a rational structural system and endeavor to make the structure that develops as sightly as possible whichever way it comes out! If it is a house, if it is rectangular, if shingles and clapboards are the best coverings available for the money, and it seems to look not unlike a Cape Cod cottage—What under heaven's name is wrong with that? If it is two hundred feet square and a saw-tooth roof will light the interior well and economically—What is wrong with that, even if it can't be found in an old book?

A pox, I say, on both your houses, ye intolerants at either extreme. Also a pox on ye opportunists who, caring not too much for your client's interests, are making a bid for the "newsworthiness" accolade of The Architectural FORUM.

W. E. MANHART, Arch.
Sacramento, Calif.

Our highest accolade to sagacious architect Manhart.—ED.

"PLANNING WITH YOU"

Forum:

I should like to commend The Architectural FORUM on its pamphlet "Planning With You." . . . I have received letters showing considerable interest in it and other housing material sent with it.

Like other groups, we have had rather indifferent, in fact poor, success in stimulating local interest and action in such fields as housing and community planning in Canada. There are several reasons for this:

(1) in most cities of Canada, large numbers of citizens have no franchise in municipal elections, due to archaic restrictions of the vote to ratepayers, property owners, leaseholders, and the like;

(2) for some reason or other, municipal elections in Canada generally do not run on party lines. Candidates usually run as in-

(Continued on page 50)

PERSONALIZED HEATING CONTROL *brings*

MODUFLOW*

TO APARTMENT BUILDINGS

The benefits of Moduflow, already acclaimed by home owners everywhere, are now available for apartment buildings with Minneapolis-Honeywell Personalized Heating Control.

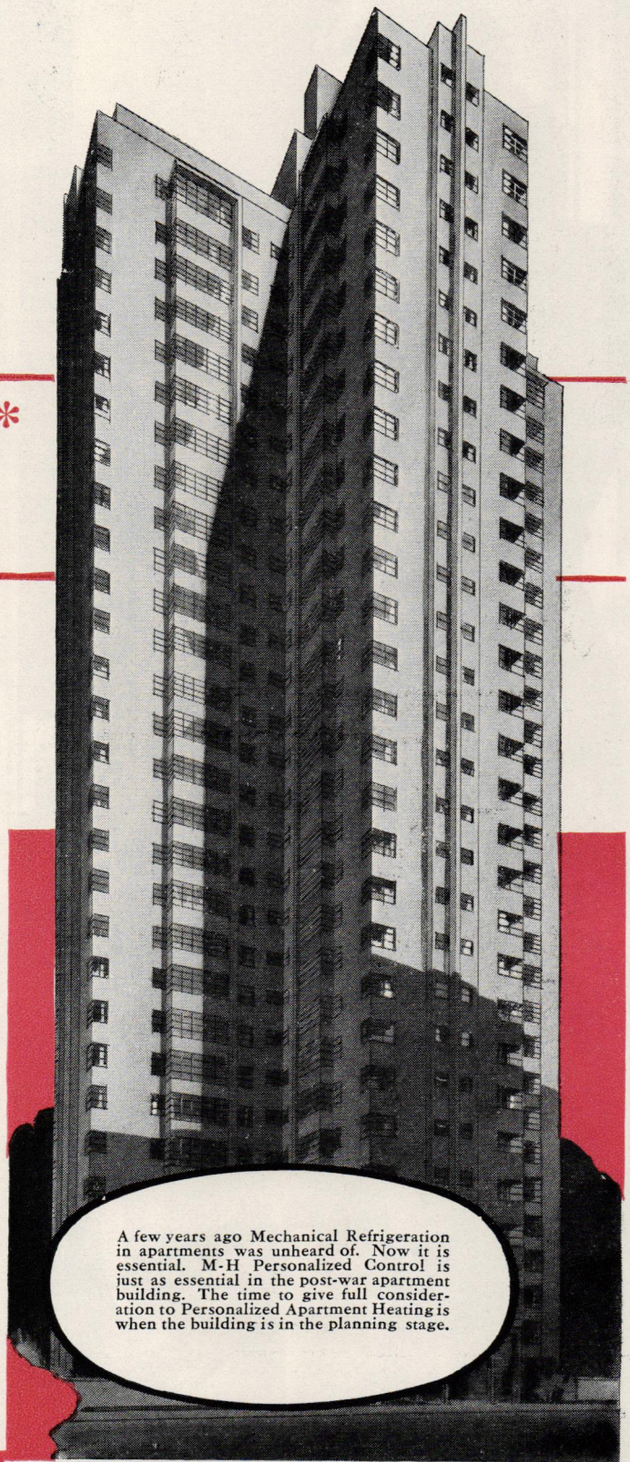
Entirely New Advantages . . .

In a building equipped with Personalized Heating Control, every tenant is able to select just the temperature desired. Each family is independent of the heat preferences of other occupants. Overheating, with resultant waste of fuel, is eliminated. These are truly remarkable features — entirely unknown just a few years ago. Yet sales records demonstrate that when you specify Personalized Heating Control, property owners and managers recognize quickly the advantages of easier rentability and heating economy.

For All Buildings . . .

Honeywell P. H. C. Systems are suited for apartment buildings of any size. During construction, this new development can be installed at a small fraction of the over-all cost. For existing buildings, installation is handled without remodeling or *even redecorating*. Moreover, Personalized Heating Control is adaptable for air, water and steam heating plants. Mail the coupon today for full information and engineering data.

* **MODUFLOW is Honeywell's newest heating control system for homes. It means heat *modulated* to just the right comfort temperature, with a uniform and continuous flow. Moduflow will eliminate "up-and-down" temperatures caused by ordinary intermittent heat supply.**



A few years ago Mechanical Refrigeration in apartments was unheard of. Now it is essential. M-H Personalized Control is just as essential in the post-war apartment building. The time to give full consideration to Personalized Apartment Heating is when the building is in the planning stage.

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2601 Fourth Avenue South, Minneapolis 8, Minn.

Please send information about M-H Personalized Heating Control for apartment buildings.

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The ad started



Typical new-home-wanting family (*more than 1 out of every 3 Post-reading families plan to purchase or build a home*) are looking through their favorite magazine when an ad jumps out of a page and hits 'em in the eye. (*Survey after survey shows that people* LIKE *to read advertising in the Post—far more than in any other magazine.*)

that a rumpus ROOM



"See here!" lady says to husband. "What's the rumpus?" says he. "That's just it!" she says. "I want a rumpus room like the picture in this Post ad!" "Don't push me," he says. "I saw the ad, too, and I'm way ahead of you." (*7 out of 10 of all the Post's new-home-wanting families say that a recreation room is necessary or desirable.*)

They talk it over with experts . . . and when they see the plans, studded with familiar brand names right out of the Post, they're ready to do business. (*When a recent survey asked dealers, "In what national weekly magazines would you prefer to see building materials advertised?", 70 per cent chose the Post—almost twice the number that voted for a second magazine. The trade knows the power of the Post.*)



IT PAYS TO HAVE THE POST PAVE THE WAY

THE SATURDAY EVENING POST

LETTERS

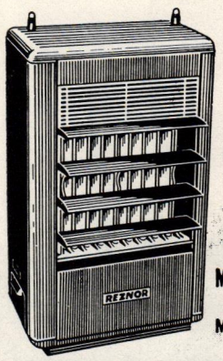
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NO BOILERS • NO STEAM LINES
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dividuals, not on a party ticket. The CCF party has had several very encouraging victories in provincial and federal elections, but has had setbacks practically every time it has tried to enter municipal politics with a slate of candidates, and the same holds true largely for other parties.

(3) under rather archaic constitutional provisions and judicial precedents, the jurisdiction and powers of the municipal, provincial and Dominion governments in relation to one another are not clearly defined, and this has led to numerous "stalemates" in such fields as housing, social welfare, etc. A Dominion-Provincial Conference on Postwar Reconstruction is now being held to try to straighten this whole question out.

This combination of circumstances has led to appalling apathy and lack of interest in municipal politics—in recent elections in two of Canada's leading cities, for instance (Ottawa and Vancouver), less than one-third of the adult population actually voted. Hence the serious lack of progress in Canada in such highly important fields as Housing and Community Planning. Only a very few cities have planning boards that are at all adequate.

Just what can be done is hard to say. The CCF party is committed to a program of large-scale financial aid from the Dominion Government to provinces and municipalities to help launch adequate housing and community planning. Included in such a program should be a strong educational effort to develop a healthy, democratic group interest in local affairs and local planning. We certainly agree with the foreword in your pamphlet, to the effect that successful planning must come from the ordinary citizen as much as or more than from the expert.

The housing problem has reached such a crisis in Canada, with the return of our men from overseas, that the public, as well as the expert, is being forced to take an active interest in the subject. Now is certainly the best time for a concerted program of public education.

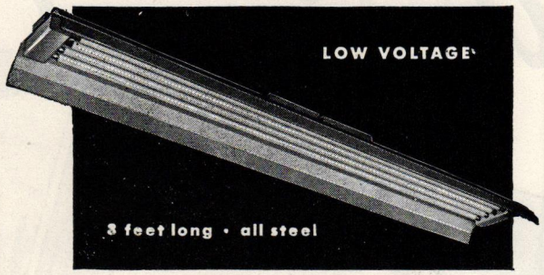
STUART JAMIESON
Cooperative Commonwealth of Canada, Ottawa, Ontario

Forum:

The public generally has become increasingly aware of planning and the vital need for it. I can say that your pamphlet has resulted in crystalizing much of the vague thinking concerning planning and will before long evidence itself in definite projects, one of which is in the formative stage for this area now.

(Continued on page 54)

*COLOVOLT COLD CATHODE INDUSTRIAL FIXTURES



Here is the new Colovolt industrial fixture, one of a complete line of industrial and commercial "packaged" units. Equipped with the standard 93" Colovolt 10,000 hour lamp, Colovolt fixtures may be used singly or in continuous line lighting in multiples of 8 feet. Instantaneous starting, no flickering, guaranteed for 1 year except for failure due to breakage are extra advantages of the Colovolt Cold Cathode low voltage fluorescent lamp. The long life expectancy of Colovolt lamps may be realized even when constantly turned on and off, and *pre-scheduled re-lamping, with no loss of production or time, is now possible with Colovolt installations.*

Contact your electrical wholesaler or jobber, or write us for full details and prices.

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Chamberlin offers a complete, factory-installed Metal Weather Strip Service for commercial, residential, institutional and industrial buildings. Oldest and largest weather strip service in the world with 50 years' experience. Chamberlin Metal Weather Strips greatly improve storm window efficiency. All installations made by factory-trained mechanics, working under close factory-branch supervision. Proper installation is half the job and Chamberlin does it right. Chamberlin men study your needs as they would their own.

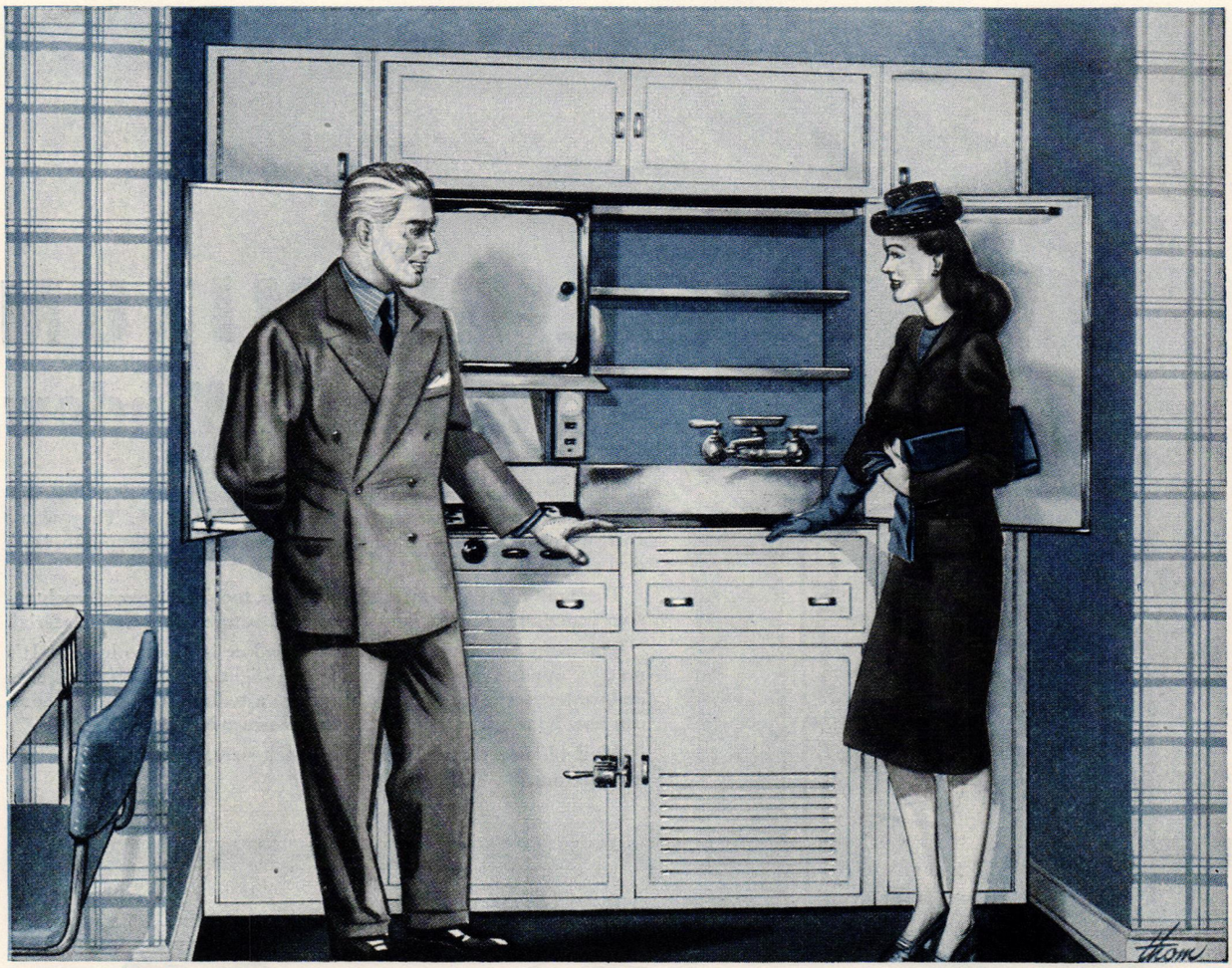
Free Survey—For free survey and estimate, call nearest Chamberlin office or write factory. Chamberlin Metal Weather Strips pay for themselves in fuel saved. Ask for further information today.



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See insert in Sweet's Catalog

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Uncrate . . . connect . . . rent . . . all in a single day!

Everybody knows that Parsons Pureaire Kitchen, using less than 8 sq. ft., saves room in any plan of multiple small apartments. But Pureaire also SAVES TIME.

Delivery and installation of old-style multi-unit kitchens is always a builder's headache. Often that task consumes weeks.

But each Pureaire will come complete in its crate. Every detail will fit right into your plan. Uncrate, connect gas, water, drain, electrical current and flue. Then RENT ON THAT VERY SAME DAY.

Sounds amazing but it's been done hundreds of times. Such prompt renting easily absorbs any small cost difference between Pureaire and an old style kitchen of detached units.

Postwar Pureaires will be even handsomer and more capable than the prewar Pureaires you already know. But dimensions and mounting data WON'T BE CHANGED. So go right ahead.

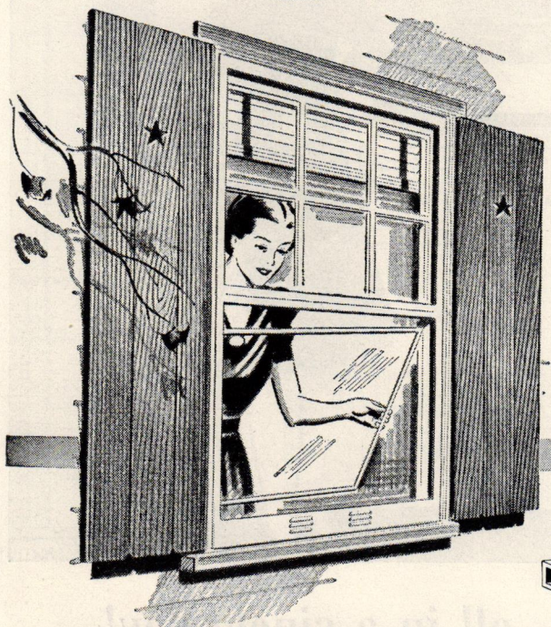
ARCHITECTS:—Your Sweet's Catalog carries full Pureaire specifications. Or write us.

THE PARSONS COMPANY

15000 OAKLAND • DETROIT 3, MICHIGAN

PARSONS *Pureaire* KITCHEN

Now! an ALL-ALUMINUM All-Weather Window



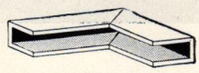
When you specify all-weather windows, remember that 'Orange' Windows are made *entirely* of Alcoa ALUMINUM. They won't rust, warp, stain or rot. Painting is unnecessary, for aluminum is its *own* protection against the elements.

Their natural-finish means good looks, too. The narrow, unobtrusive frames blend with any style architecture or exterior material.

This precision-made, long-lasting window is easy to handle. It's no trick at all to interchange the feather-light ALUMINUM screens and winter storm panes. What was once a tedious, dangerous chore, can now be taken care of by any homeowner in seconds.

Available in a complete range of stock sizes. Write today for full information.

With this featherweight ALUMINUM unit, changing storm windows and screens is a quick, easy inside job. Winter pane removes with a lift and a tilt. Screen replaces it in a jiffy.



NARROW WIDTH FRAMES

Extruded forms used almost entirely in making the 'Orange' Aluminum All-Weather Window. Frame width reduced without saerificing strength.



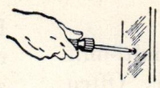
DESIGNED FOR BEAUTY

Made entirely of natural-finish ALUMINUM to harmonize with any style of architecture or exterior finish. Quiet, dignified, it knows its place!



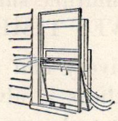
EASY TO CLEAN

No need to stand on a step-ladder or chair to remove upper panes for quick, easy washing. All changes made comfortably and safely from the lower portion of the window.



SPECIAL ADJUSTABLE FEATURE

Special adjustable feature of the 'Orange' All-Weather Window allows for variations in size of openings. A few turns with a screw driver and frame is set for form-fit weathertight snugness.



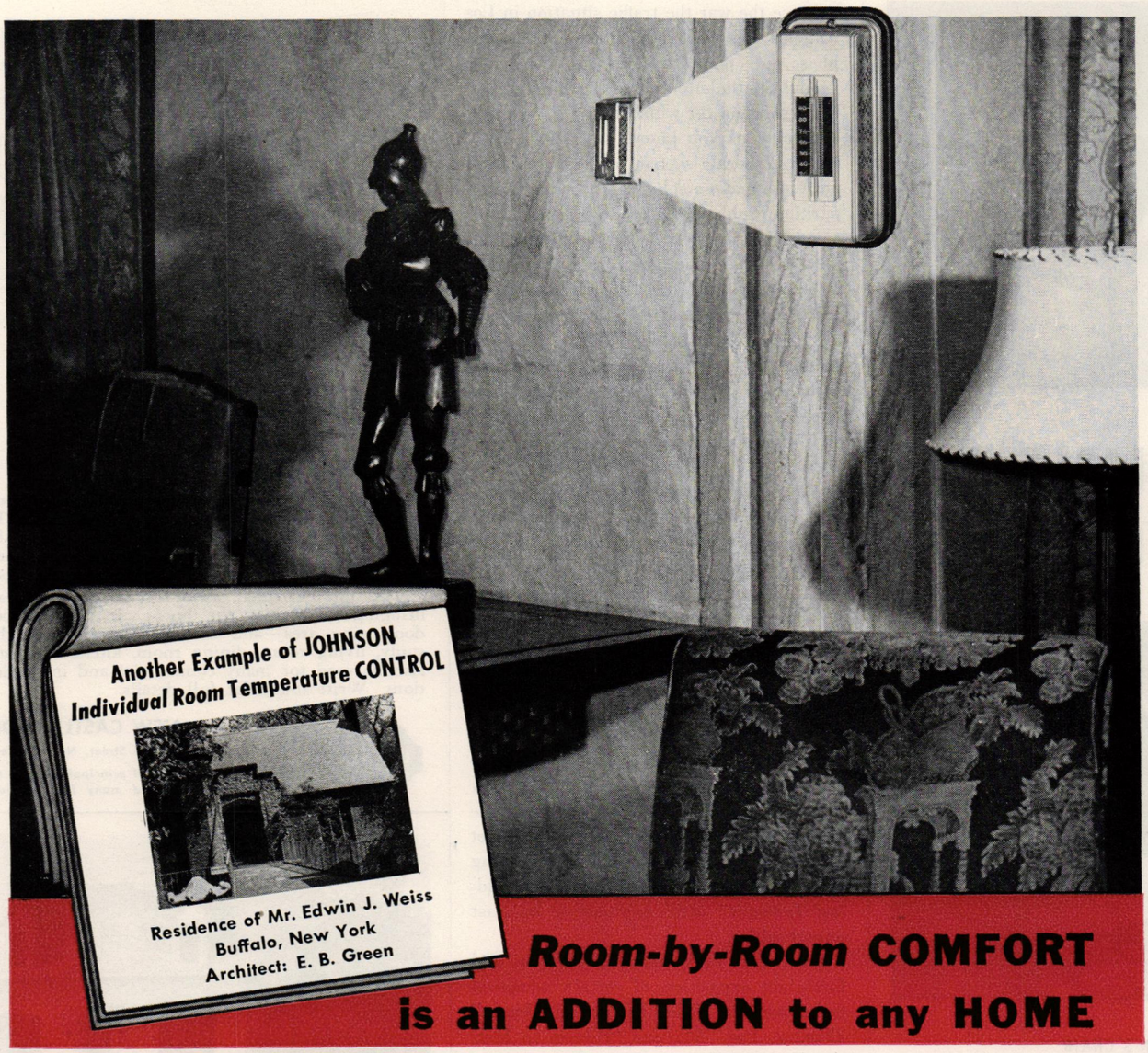
YEAR-ROUND DRAFT-FREE VENTILATION

This amazing window is adjustable four ways for draft-free, rain-proof, non-fogging ventilation. Saves up to 30% in fuel. Soon pays for itself.

'Orange' ALUMINUM ALL-WEATHER WINDOWS

Patents applied for

MANUFACTURED BY THE ORANGE SCREEN COMPANY, MAPLEWOOD, NEW JERSEY



Room-by-Room COMFORT is an ADDITION to any HOME

Fortunately, the comfort and economy of Johnson automatic temperature control for individual rooms can be added in homes (and in larger buildings, too) even though it was not originally included in the planning and construction. In the Weiss home (illustrated above) the Johnson system was installed several years after the building was completed and occupied. Mr. Weiss reports that many benefits have been experienced as a result of the installation.

For instance, the high-ceiling living room is now more comfortable at "head height," during the winter, because of the uniform temperature which is maintained. With Room-by-Room Control, air currents no longer are troublesome, which means that drafty conditions and objectionable dust movements have been eliminated. Also, the problem of "dried out" furniture, paintings, tapestries and other objects of art has been solved. To have every room in the house "temperatured," day and night, exactly to suit the individual occupant is a great luxury, inexpensively achieved.

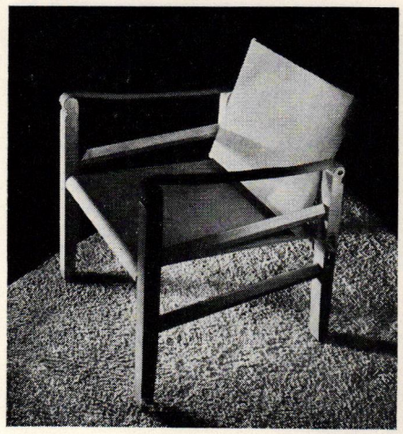
Mr. Weiss sums up his experience with Johnson Individual Room Temperature Control as follows: "We are grateful for the Johnson System. It requires very little attention, and, in a house that contains many modern improvements, we consider it the most desirable feature that we have ever installed."

JOHNSON SERVICE COMPANY, Milwaukee 2, Wis.
Direct Branch Offices in Principal Cities.

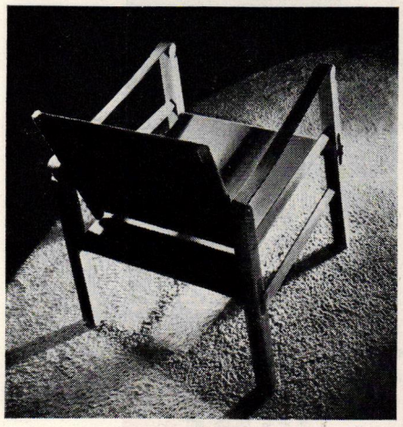
JOHNSON *Automatic Temperature and Air Conditioning* **CONTROL**

DESIGN • MANUFACTURE • INSTALLATION • SERVICE

LETTERS

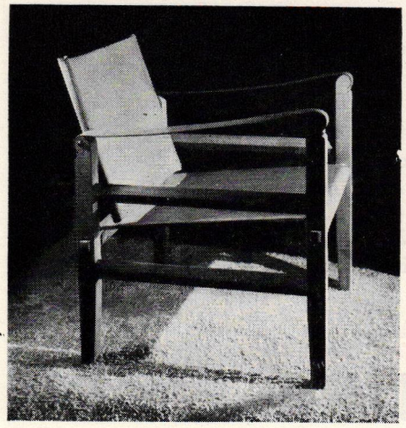


DUNBAR
for MODERN



THE CAPTAIN'S CHAIR
to be produced in 1946

DUNBAR FURNITURE MANUFACTURING CO.
BERNE, INDIANA
1638 Merchandise Mart, CHICAGO, ILL.



Since the war the traffic situation in Los Angeles has become acute. This is one phase of planning that is constantly brought to the attention of the general public, a solution for which they will support. This city, as you know, has started work on an elaborate system of freeways. Will not these make a solution of the traffic and parking problem existing in central as well as outlying business centers even more imperative? The dumping of additional cars into areas whose streets and parking spaces are already inadequate will tremendously complicate the problem. Will not business sections, in order to survive, be forced into a change? What will happen to such irrational developments as the Miracle Mile, and other shoe-string business sections?

As I see it, either existing business centers must plan or new, proper and adequate centers will be built leaving the old to die on the vine. I hope the FORUM, in the public interest, will continue its presentation of planning material, particularly business center layouts for communities of varying sizes.

KERSEY KINSEY
North Hollywood, Calif.

PROGRESS REPORT

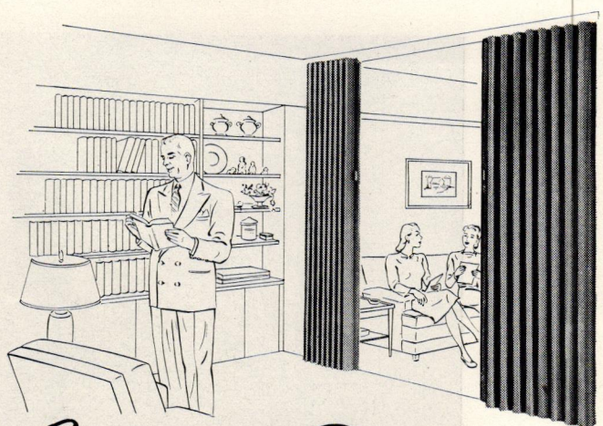
Forum:

Re: "The Great Housing Shortage" in LIFE Magazine for December 17, 1945. It is heartening indeed to read probably the most forceful and aggressive language yet levelled against the archaic, fumbling guess-work with which the so-called "Building Industry" still approaches its vast opportunities.

Ever since your searching analyses and forthright exposition of certain advanced techniques in "The Integrated House," (FORUM, Dec. '38) and "Houses in Half the Time," (FORUM, Mar. '39), I have watched your outstanding leadership toward modern production methods in housing construction. Your sweeping indictments of traditionalism in techniques, which have gone undefended by the industry, are now common knowledge among a large percentage of informed Americans. I believe it is time to be specific with remedies, with comparative techniques—craft-by-craft—constructively presented to replace the criticisms heretofore left to generalization.

Since my recent participation, as production and methods engineer, with several of our large war-born housing and construction projects, I have had an opportunity to observe—from the inside—the techniques employed by several of our best-known postwar housing organizations in meeting today's market. Such time and money saving methods as shop-pre-cut-wood-framing (subject of a widely distributed manual by

(Continued on page 58)



Modernfold Doors

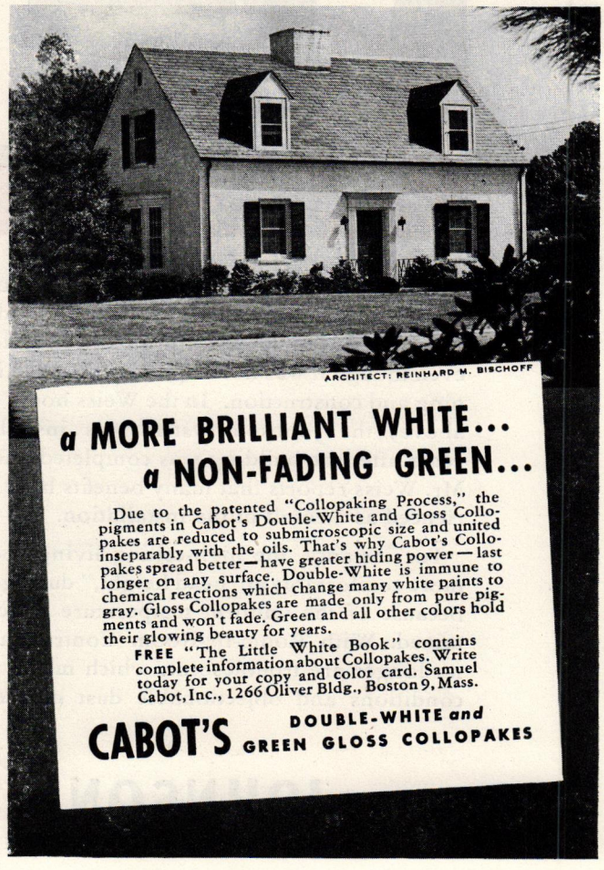
—THE ANSWER TO SPACE FLEXIBILITY PROBLEMS

Modernfold Doors are a welcome addition to homes that must be flexible, informal, convenient and efficient. These accordian-type closures, when folded to the wall, make one room out of two, When privacy is needed, close the doors—and the rooms are "walled off" for their specific uses.

This fabric-covered, metal-framed door is beautiful, too—bringing color into the home. It saves space—eliminates door-swing area—and fits into any part of the house—in study, living room, dining room, kitchen and closet. It can also be used for many commercial and institutional applications. Write today for full details.

modernfold DOORS

NEW CASTLE PRODUCTS
1613 I Street, New Castle, Indiana
Dealers in all principal cities in the United States and many foreign countries.



a MORE BRILLIANT WHITE...
a NON-FADING GREEN...

Due to the patented "Collopaking Process," the pigments in Cabot's Double-White and Gloss Collopakes are reduced to submicroscopic size and united inseparably with the oils. That's why Cabot's Collopakes spread better—have greater hiding power—last longer on any surface. Double-White is immune to chemical reactions which change many white paints to gray. Gloss Collopakes are made only from pure pigments and won't fade. Green and all other colors hold their glowing beauty for years.

FREE "The Little White Book" contains complete information about Collopakes. Write today for your copy and color card. Samuel Cabot, Inc., 1266 Oliver Bldg., Boston 9, Mass.

CABOT'S DOUBLE-WHITE and GREEN GLOSS COLLOPAKES



Cushion with FOAMEX* Cover with Velon*

• Here is a fabric—*Velon*—so luxurious, so glowingly exquisite that it rivals precious stuffs of fabulous camel caravans.

Here is a cushioning—*Foamex*—so comfortable it floats you into soft dreams of Arabian Nights.

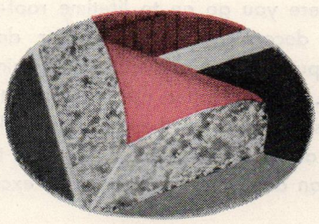
Yet these same materials—*Foamex* and *Velon*—endured the heaviest traffic, took pounding and abuse throughout long years of war—and they've still to show the slightest sign of wear!

No wonder leading air and rail lines specify *Foamex* and *Velon* for new interiors. No wonder hotels, restaurants, and business firms are redecorating their finest guest rooms, lounges, lobbies, and reception rooms in these amazing Firestone materials.

***Foamex* is a new principle in cushioning comfort.** Millions of breathing air-and-latex cells foamed together, provide floating support. These tiny, bubble-like cushions ventilate seating, keep it cool, fresh, clean. And because *Foamex* replaces old-style upholstery "innards" with one simple welded-together material, it cannot pack, lump or shift.

***Velon* makes luxurious color ever-practical.** Because dirt and grease cannot dig their way into *Velon's* non-porous threads—because *Velon* is so easily cleanable—because it won't fade, become overheated, absorb moisture, scuff, snag or "grow" out of shape—*Velon* fabric is completely practical in a wide variety of patterns, textures and weaves.

You can specify *Foamex* and *Velon* now. Write Firestone, Akron, today for further information. If your regular sources cannot supply *Velon* fabrics, Firestone will be glad to send them samples and full technical advice.



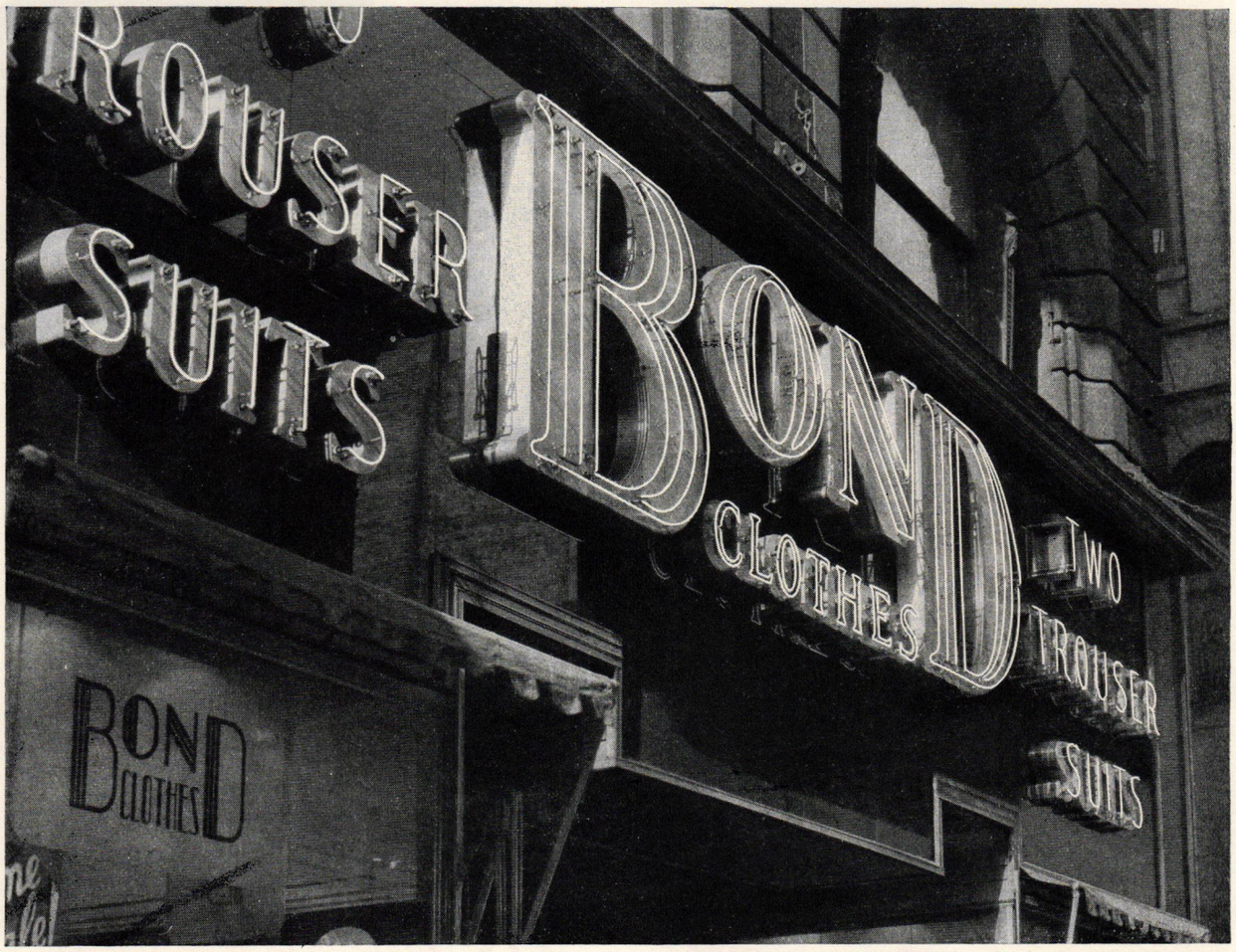
This is Foamex cross-sectioned to show you the millions of tiny air-and-latex bubbles. *Foamex* is now electronically processed to insure longer wear.

Listen to the Voice of Firestone Monday Evenings Over NBC

BEST TODAY··· STILL BETTER TOMORROW

Firestone

*TRADE MARK



Sign for a clothing store made of ARMCO 18-8 Stainless Steel. After ten years of continuous service in a corrosive industrial atmosphere the owner says, "It is as new-looking as the day it was put up. An occasional washing with soap and water keeps it gleaming bright."

It greets you with a bright smile!

Store-fronts and signs are only a start toward the many building uses of ARMCO Stainless Steel. Here it is used for its rich (though not gaudy) attractiveness, its ability to attract attention and draw customers into the shop.

From there you go on to lifetime roof-drainage, interior decorative work, elevator doors, kick plates, push plates and complete stainless steel kitchens. In the latter use, the bright, smooth, rustless surface speeds the work, cuts upkeep costs sharply and brings a greater return on the investment than any other material. It is exceptionally strong and hard, resists scratching and denting. Being a solid metal, there is practically no wear-out to ARMCO Stainless Steel.

Yes, the building applications of stainless steel are practically endless. You can use it with full confidence that the new beauty and practical advantages that owners want will "keep them happy" for years to come. But be sure the stainless steel you choose is Armco—a trusted name in steel. The American Rolling Mill Company, 141 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.

THE AMERICAN ROLLING MILL COMPANY

SPECIAL-PURPOSE SHEET STEELS

MADE OF ARMCO STAINLESS STEEL

Magic Chef Design Contest Enters Final Period—

ENTRIES END MIDNIGHT, MARCH 4, 1946

The Magic Chef Design Competition, first announced in November, 1945, is nearing the final date for entries. If you have not already entered this competition and are desirous of doing so, mail the attached coupon at your earliest convenience. No entries will be accepted postmarked later than midnight, March 4, 1946. This competition is the first important one of its kind in the field of industrial design. It is, in effect, a challenge to the profession to show whether or not product design can be advanced through this method. In addition, it offers architects in particular an incentive to extend their design activities from the home itself to one of the most important items of equipment in it.

Grand Award	$5,000
Second Award	$3,000
Third Award	$2,000

Fourth, fifth and sixth winners will each receive award of $1,000. The next 10 contestants will each receive award of $500. Contest ends midnight March 4, 1946.

Magic Chef

GAS RANGE DESIGN COMPETITION

SPONSORED BY THE ARCHITECTURAL FORUM 350 Fifth Ave., New York 1, N. Y.

GEORGE NELSON, A.I.A., Professional Adviser, c/o The Architectural Forum, Dept. E, Empire State Building, 350 Fifth Ave., New York 1, N Y.

I intend to enter the Magic Chef Design competition. Please send me the program, including the conditions governing the competition and awards.

Name_____

Firm (if any)_____

Address_____

City_____ State_____

Check one: Architect____ Designer____ Draftsman____ Student____

Other Occupation_____

LETTERS



Check Exclusive Anchor Features

Anchor Chain Link Fence provides important and exclusive advantages which are found in no other fence:

Deep-Driven Anchors, which facilitate erection, hold fence permanently erect and in line, yet permit relocation without waste if enclosed area changes.

Square Frame Gates, inseparably butt-welded at corners, amazingly free from sagging and warping.

Square Corner Posts, better looking and much stronger than round posts of comparable size.

U-Bar Line Posts, which further increase rigidity, strength and durability.

Send for our Book No. 110 for your A. I. A. File No. 14-K. Shows many types and uses . . . pictures prominent installations . . . contains structural diagrams and specification tables for Anchor Chain Link Fence. No obligation. Address: Anchor Post Fence Co., 6635 Eastern Avenue, Baltimore 24, Maryland.

Anchor Fence
Nation-wide Sales and Erecting Service

West Coast Lumbermen's Assn. in January 1939) are still little known outside the prefabrication shops. Re-usable concrete forms are still deferred in favor of the wood butchery and discretionary bungling we have "deplored" for decades.

Surely, with every American "housing-conscious" and a housing industry as vulnerable in its shameful wastefulness as is ours, now is the time to attack with incisiveness and force its every glaring weakness. To wait for the prefabricators to "sell" the public and the codes on the whole idea would consume valuable time—probably years—in which real, solid progress can be made toward eradicating much of the craft-backwardness which still takes its traditional toll from the ultimate consumer—the American homeowner.

PAUL DEHUFF

Los Angeles, Calif.

CONTRACTING OVERSIGHT

Forum:

I have just finished looking over the October issue of The Architectural FORUM and I am all "hot and bothered." For example, on pages 94 and 95, I note in good big type "Thompson-Starrett, General Contractors of the Abbott Laboratories." I note on pages 102 to 116 a most interesting article on Atom City, but I fail to note any reference to the fact that Atom City was operated for the past two years by a wholly owned subsidiary of the Turner Construction Co., i.e. Roane-Anderson Co. I note on pages 132 to 136 an article describing Higgins Aircraft, Inc., but I fail to note that this was built by the Turner Construction Co.—Raymond Concrete Pile Co.

How come?

J. P. H. PERRY
Vice President

Turner Construction Co.
New York, N. Y.

To FORUM's researcher a rebuff.—ED.

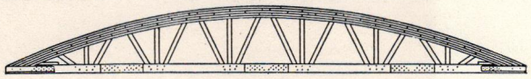
LETTER FROM BRAZIL

Forum:

Modern Brazilian architecture is one of the bravest gestures in modern art. Much of it is sound, often brilliant, and Philip E. Goodwin and G. E. Kidder Smith of the Museum of Modern Art have done much to make it world-famous in their book *Brazil Builds.* Three Australian architects who had read *Brazil Builds* just spent a month here looking over the scene, and are returning to Australia with some odd and interesting conclusions. Their names are Reilly, Howard and Magruther, and they

(Continued on page 62)

Build for Any (All) Tenants

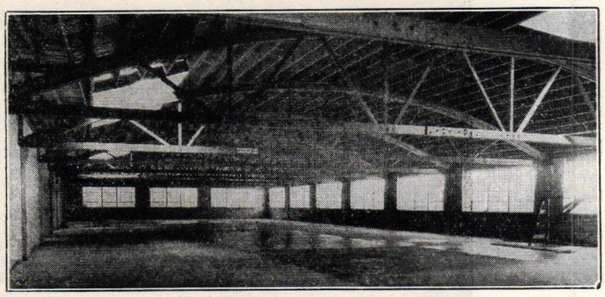


with American-bowstring trusses

Column-clear, American trussed buildings stand best chance of constant rental—are most easily converted to garage, bowling alley, super-market, yet, through simple partitioning, quickly accommodate the small space user too.

Light weight American-bowstrings are Sensibly Priced . . . making this modern type building even more profitable.

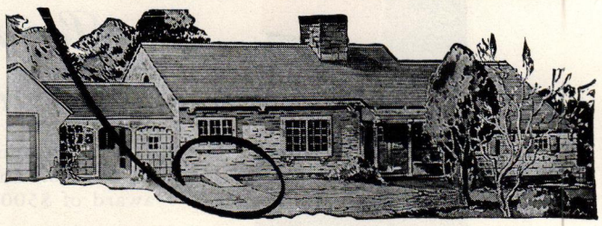
Complete Catalog Sent Upon Request.



American Roof Trusses, used on the Nation's building for 25 years, are approved everywhere—comply fully with all City Building Codes.

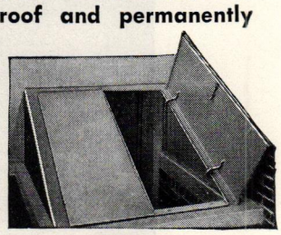
AMERICAN ROOF TRUSS CO.
6854 Stony Island Avenue, Chicago 49 — Plaza 1772

A MARK OF QUALITY



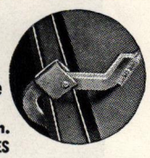
in home cellar construction

If **you want the convenience and safety of an accessible cellar . . . *If* you want a leak-proof, burglar-proof, termite-proof and permanently trouble-free cellar door which will always be a source of satisfaction to you . . . *buy***



BILCO

COPPER STEEL
BULKHEAD DOORS
A Sound and Sensible Investment
ASK YOUR DEALER or write
BILCO MFG. CO.
162 Hallock Ave., New Haven, Conn.
SIDEWALK AND BULKHEAD DOORS · STEEL ROOF SCUTTLES



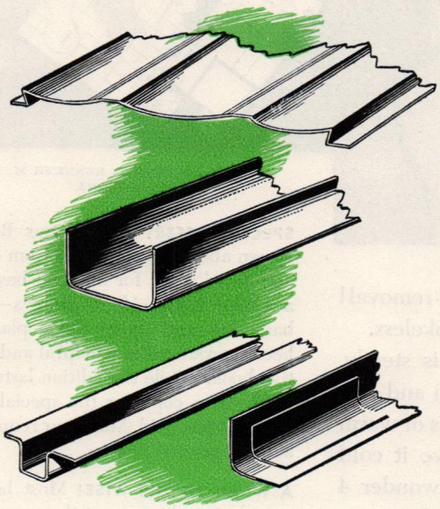
AUTOMATIC
SAFETY
CATCH

How Up-To-Date are you on ALUMINUM?

Is this a FINISHED FORMED SHAPE?



Statue of the Colleoni in Venice, by Verrochio.



Here are a few of the thousands of Finished Formed Shapes which can be produced by new Reynolds roll-forming techniques. Neither extruded nor stamped; yet precision-bent to exact specifications, in many cases they produce a better product more economically.

NOT in the aluminum language! At Reynolds a finished formed shape is any aluminum shape made by continuous roll-forming. The shape itself may be stair-nosing or the frame member of a box car. It may be store countertrim or ribbed corrugation for a bus siding. It may be one of thousands of shapes, including some formerly made by extrusion or stamping.

Dimensions? From .008″ to .250″ thick. From ¼″ to 38″ wide. Length? Your convenience in shipping, handling and erecting dictates that.

What shapes are you interested in? What shapes haven't you been able to get satisfactorily in extrusions or stampings?

Phone the nearest Reynolds office or write Reynolds Metals Co., Aluminum Division, 2528 South Third St., Louisville 1, Kentucky.

REYNOLDS METALS

9238

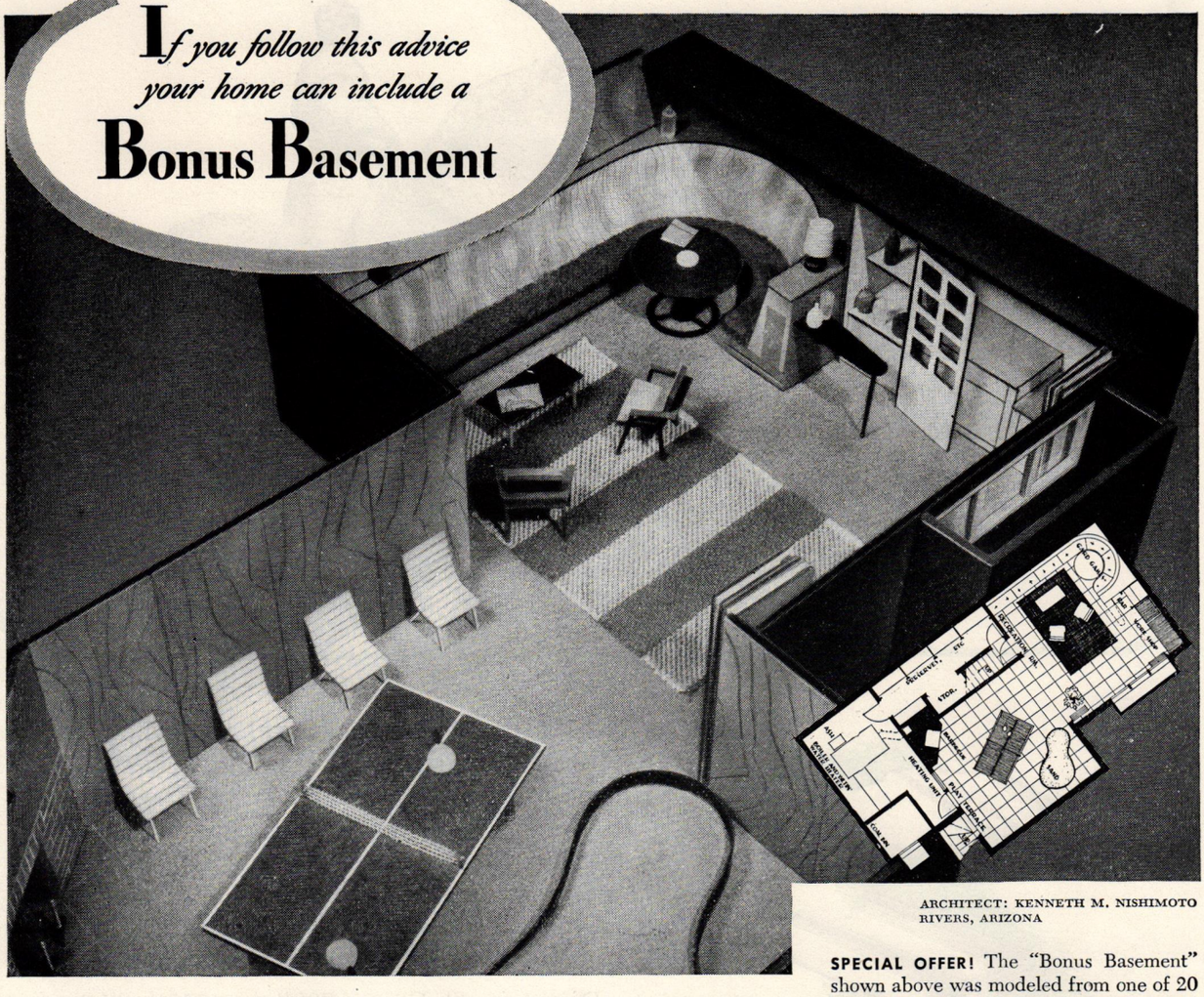
REYNOLDS

The Great New Source of ALUMINUM

INGOT • SHEET • SHAPES • WIRE • ROD • BAR • TUBING • PARTS • FORGINGS • CASTINGS • FOIL • POWDER

If you follow this advice your home can include a

Bonus Basement



ARCHITECT: KENNETH M. NISHIMOTO
RIVERS, ARIZONA

As you've probably already found out, one of the thrills of planning the building or remodeling of your home is deciding what kind of recreation room your basement will boast. And you're due for still another thrill, if you take this advice: *heat your new home with Bituminous Coal.* For then you can have a "Bonus Basement"—furnished and paid for in a few years' time by the sizable savings that come from using this lowest-cost, most dependable of all home-heating fuels.

And if you install one of the efficient new stokers you'll find Bituminous Coal is also an "automatic" fuel—even to the point of ash removal! Clean, quiet, odorless, smokeless.

Coal heat, you know, is steady, uniform. It doesn't pop on and pop off to fill a room with bursts of warm air one minute—and leave it cold and drafty the next. No wonder 4 out of every 7 homes in the U. S. burn coal!

If you'll take advantage of the special offer described at the right, we'll send you real help and suggestions for planning your Bonus Basement. Then talk it over with your architect or builder.

BITUMINOUS COAL INSTITUTE
60 East 42nd St., New York 17, N. Y.

SPECIAL OFFER! The "Bonus Basement" shown above was modeled from one of 20 architects' plans for an ideal basement of a modest home. All 20 designs—showing basement and upper floor plans—have been reproduced in a helpful and informative book. While the edition lasts, we will send you a copy for the special price of only 10¢ postpaid. Mail your request to the address printed below.

A WORD TO THE WISE! Most houses are now designed to permit the use of Bituminous Coal. Be sure you can have the advantages of this low-cost, dependable fuel in your new home. A little care in planning for coal storage and a chimney flue of normal size will assure that you can enjoy the health, comfort and dependability that only modern coal heat can give you. And it will also assure you of *economical* heating for the life of your house, because this country's 3,000-year coal supply makes certain that shrinking reserves will not force coal prices upward.

FOR ECONOMY, DEPENDABILITY, AND HEALTHFUL HEAT . . . YOU CAN'T BEAT BITUMINOUS COAL

(This is one of a series of advertisements now appearing in home-makers' magazines)

10 BILLION DOLLARS
...with just one purpose



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FROM COAST TO COAST

LETTERS

came to fill gaps in a plan to rebuild tropical bombed-out Darwin.

Reilly, who is with the Australian Department of Public Works, tells of a recent visit to the Brazilian projects in Pampulha, outside Belo Horizonte:

"The mass, grouping and fenestration of the entrance to the Pampulha Casino is one of the finest things in the world today. And ten feet inside the Casino is a ghastly sight. Two ordinary pieces of gas pipe—flues for the kitchen stove—stick up into the room like an obscenity. I asked about the pipes, and found out an amazing thing. The building cost them $500,000 to build, but they forgot the kitchen. They installed it afterward, but didn't care about the looks of it. This seemed typical to me of all that we have seen of the new architecture.

"The great blank wall of the gymnasium at Belo Horizonte is an impressive thing from the outside. Not so inside. There the wall is covered with a Portinari mural of a football hero whose head projects vertically from his neck. I never saw a football hero like that in my life. By the same token, I have never seen a portrait of the Savior with bulging eyes, and with His pants falling off. Portinari has done that to Christ in the Church at Pampulha. I think Mr. Portinari should be throttled. They say he gives big salons, and that in order to be in society one must go to them. Maybe that's why Brazil's architecture is being saddled and ridden by one of the world's worst artists.

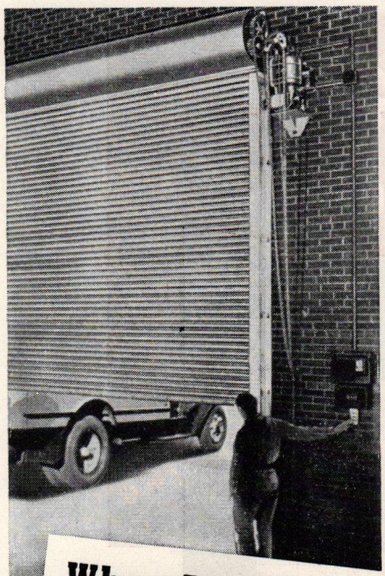
"Brazilians must learn to build from the inside out. I was quite impressed with the work they have done in cooling windows with Persian blinds and brise-soleils, but inside the buildings they seem to be lost. They build wonderful walls with poor bricks, and I don't think I've ever seen such good plaster work. But otherwise, the Brazilian architects are lost indoors. They lack all inside technicians, joiners, window fitters and such. In one $150,000 modern house, we had to walk through the dining room and the master bedroom to get to a bathroom. So much is done from afterthought. In a Copacabana apartment, for instance, the dining room is often 50 feet from the kitchen.

"The Brazilians could remedy all this by sending their young and bold architects to the U. S., England, Sweden, and even Australia for three years to study before carrying on further. As it is, they completely lack rationale."

DONALD NEWTON

Rio de Janeiro, Brazil

(Continued on page 66)



When DOORS are the issue *check these features*

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- Motor operation saves time and labor, permits remote control if desired.
- Their sturdy interlocking-slat construction assures long, low-cost service.
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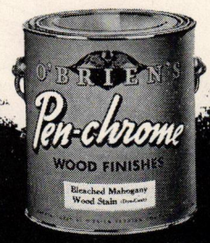
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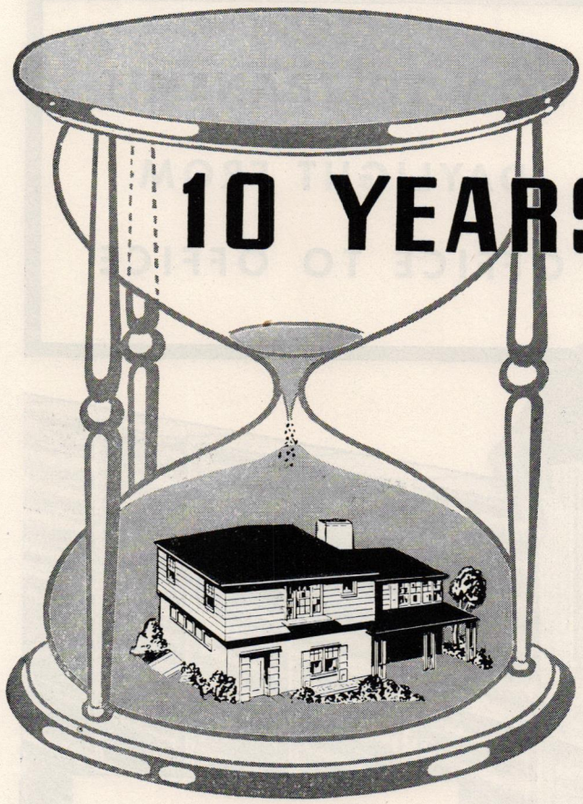
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HOW TO TRANSMIT DAYLIGHT FROM OFFICE TO OFFICE



Insulux Set-In-Wood Interior Partitions are easy to install. You need only the glass block, the pre-cut wood strips and wedges, and a few nails.

Insulux *SET-IN-WOOD** Partitions

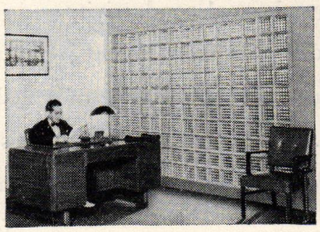
INSULUX Set-In-Wood Interior Partitions are tops with building managers.

And no wonder!

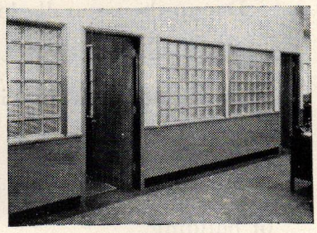
Insulux Set-In-Wood Interior Partitions have many advantages. They can be installed quickly and economically. They can be used to carry *natural* light from office to office. They are attractive in appearance. They are easy to clean and to keep clean.

Furthermore—Insulux Set-In-Wood Partitions are demountable. They can be dismantled and re-erected.

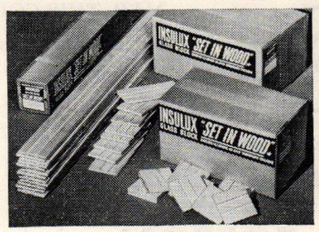
*Insulux Set-In-Wood Partitions are for use where demountability is important. For greatest permanence and privacy, and for complete non-combustibility, glass block should be set in mortar.



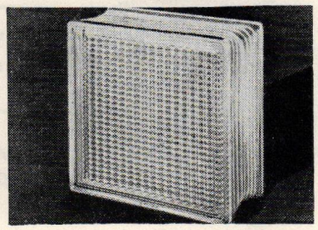
The partitions transmit daylight from office to office and provide a measure of privacy along with light.



The rooms in a building are easily changed to suit new tenants. The edges of the wood strips may be painted to harmonize with decorative scheme.



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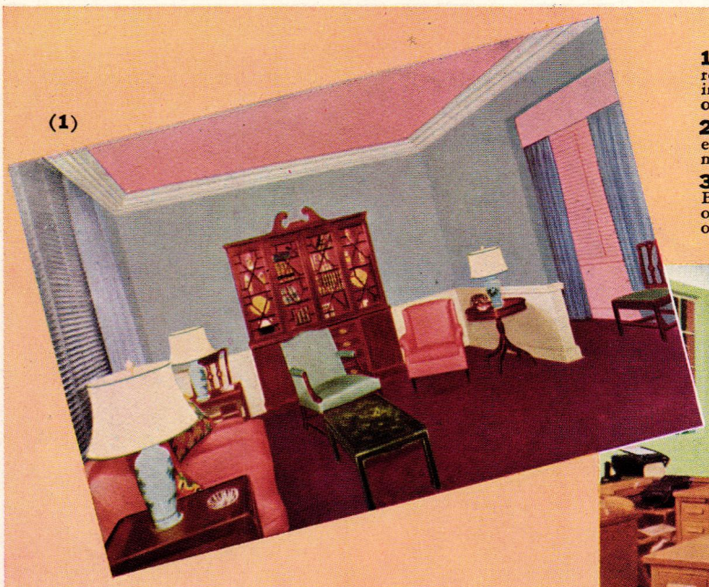
OWENS-ILLINOIS

INSULUX

GLASS BLOCK

For technical data, specifications, and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. C-14, Owens-Illinois Glass Company, Toledo 1, Ohio.

(1)



1. Use of rich, subdued colors gives this hotel living room a feeling of gracious hospitality. Room and adjoining hall are unified by repeating the room's ceiling color on the walls of the hall.

2. Cool expanses of green in this general office rest the eyes of employees. The pale tint of the ceiling reflects maximum light.

3. Color plan for a patient's room. Rose, Turquoise and Burgundy used against an ivory background. Pink is used on the ceiling for its morale-building effect and because of the warm glow it casts over the entire room.

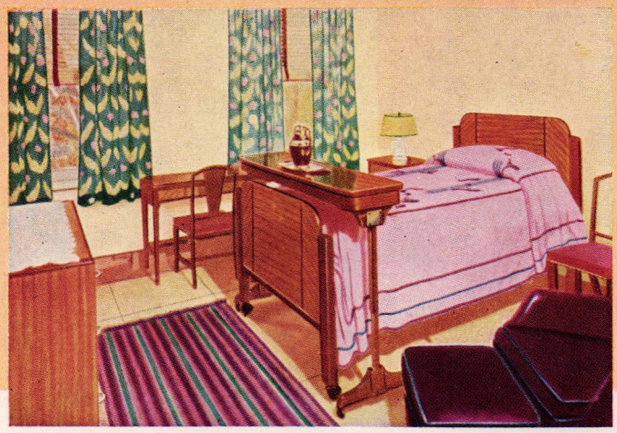


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(3)



Learn How You Can Apply the Principles of the Energy in Color—with Scientific Accuracy!

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For a complete analysis of the services color can perform write for a free, profusely illustrated, copy of our book, *"COLOR DYNAMICS for Offices, Hotels and Restaurants."* Pittsburgh Plate Glass Company, Paint Division, Dept. AF-2, Pittsburgh 22, Pennsylvania.



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WATERSPAR ENAMEL— for woodwork, furniture, metal trim—gives a china-like gloss which resists marring and abrasion.

FLORHIDE— for floor surfaces. Quick drying, tough finish which can be scrubbed frequently with soap solutions.

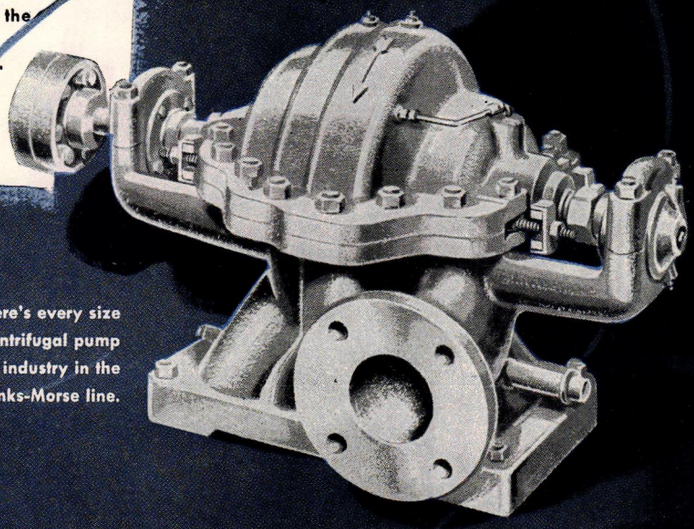
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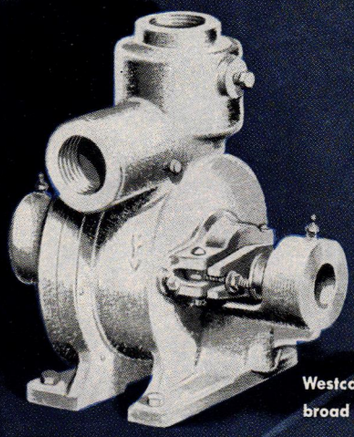
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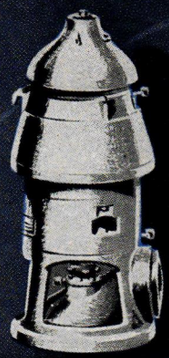


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LOOK AT THIS CRANE KITCHEN



IT'S WONDERFUL THAT WE CAN HAVE

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If you have ever seen a prospect's eyes light up when you show him a Crane kitchen or bathroom, you know how effective the name Crane can be in helping you sell homes.

Numerous surveys have proved that your prospects recognize Crane plumbing as being high in quality. Such quality equipment not only adds sales appeal to the homes you plan to build, but it is a simple testimonial to the quality construction used throughout the homes you design.

Crane factories are now busy producing plumbing and heating equipment in every price level to meet all needs of builders. This equipment possesses the high quality you expect from the name Crane, but it includes new styling plus many advanced engineering features that will appeal to your prospects. It will naturally be some time before everyone can be supplied with everything he wants, so we suggest you discuss your building plans with your Plumbing Contractor or Crane Branch. They will give you information on the Crane line as rapidly as possible, and may be able to help you secure the equipment you want when you want it.

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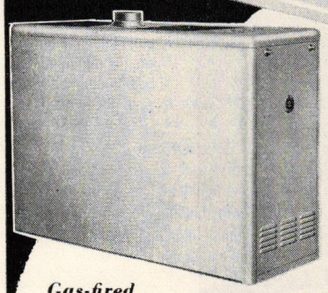
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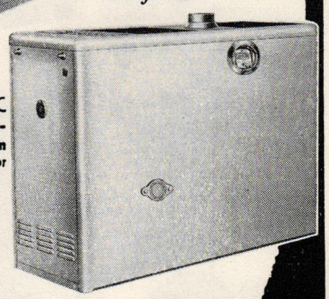
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A LETTER FROM THE PUBLISHER

Dear Reader:

We have had earlier occasion to record the arrival in the U. S. of foreign building missions, several from England, France, Russia and one from Greece. The past month has brought distinguished additions; LeCorbusier of France, W. P. Lei, young, Michigan-educated Chinese, and Bruno Zevi, Technical Information Chief of the U. S. Embassy in Rome. A word about them:



LeCorbusier

LeCorbusier, here now from France, has exerted world influence on architecture and town-planning. Born in Switzerland, he has been living in France, where he pioneered in ferroconcrete frameworks, was sponsor of "the functional" in architecture, purism in painting. He now divides his time neatly into thirds: mornings are spent on painting; afternoons on architecture; evenings on writing. He is working with the French Ministry of Reconstruction.



W. P. Lei

W. P. Lei, here on his second visit to the U. S, was born in China, lived and practiced architecture there, except for his years at the University of Michigan where he received his B. S. in Architecture in 1932. With his partner G. D. Su he has a firm in Shanghai called Hsing Yieh Architects ("Architects Promoting Industry"), specializing in industrial buildings, and during the war, arsenals, etc. About a week ago Mr. Lei received word that his firm is being retained as architects for the Chinese UNRRA.



Bruno B. Zevi

Bruno B. Zevi is an Italian-born American citizen. He followed graduation from Harvard with a Doctor's degree in architecture at the University of Rome. Currently, he is advising the U. S. Embassy there, as well as the Italian government on town-planning and reconstruction. His book, *Towards An Organic Architecture*, originally published in Italian, is now being translated into English for world-wide distribution.

These gentlemen are not pleasure bent. Their presence reminds us dramatically that tragedy is mixed in the mortar which holds together their hopes of building. Their presence, too, reminds us that more such men should come here and many more American technicians, builders and producers should go abroad. Replanning and rebuilding, for the first time, are a recognized world need. The scale and urgency of the problems and the fact that buildings, once up, cannot be erased and corrected, all underline the need for international interchange of ideas and techniques. We have no wish to belittle the role of the technical press but at best it can only supplement personal contacts. No one doubts that the U. S. can contribute measurably to foreign rehabilitation. It is less well understood that we have much to learn from our friends overseas.

* * *

As the FORUM entered its 14th year under TIME INC., we took occasion to exhume a few long-buried statistics. When the FORUM came into the TIME INC. family, it had eleven employes. Its circulation was a little over 5,000. By the end of 1945, personnel had increased more than five times and circulation, ten times. One satisfying feature of these comparisons is that we have created a good many more and better-paying jobs. And if we may be permitted an immodest observation, the quality of the staff has progressively improved.

But intelligence is not to be confused with virtue. Various members of the staff, whose motives, shall we say, are not too obscure, have tried to sabotage this department. Most recently our date of closing has been advanced, a move to tempt this writer's practiced powers of procrastination. As these paragraphs make clear, the plot, like those before it, flopped. However, it has prevented inclusion of comments on the new, large FORUM. The January issue was being delivered as these words went to press. But this much can be reported . . . six people telephoned this morning to say—"I *almost* wrote you a letter." While our opinion of such people can be growled over the phone, it finds no place in print. In brief—DON'T TELEPHONE, WRITE!

H.M.

G.I. JOBS

FORUM'S FREE PLACEMENT SERVICE FOR DISCHARGED VETERANS

see page 142

Everyone has a pet feature in this bathroom...

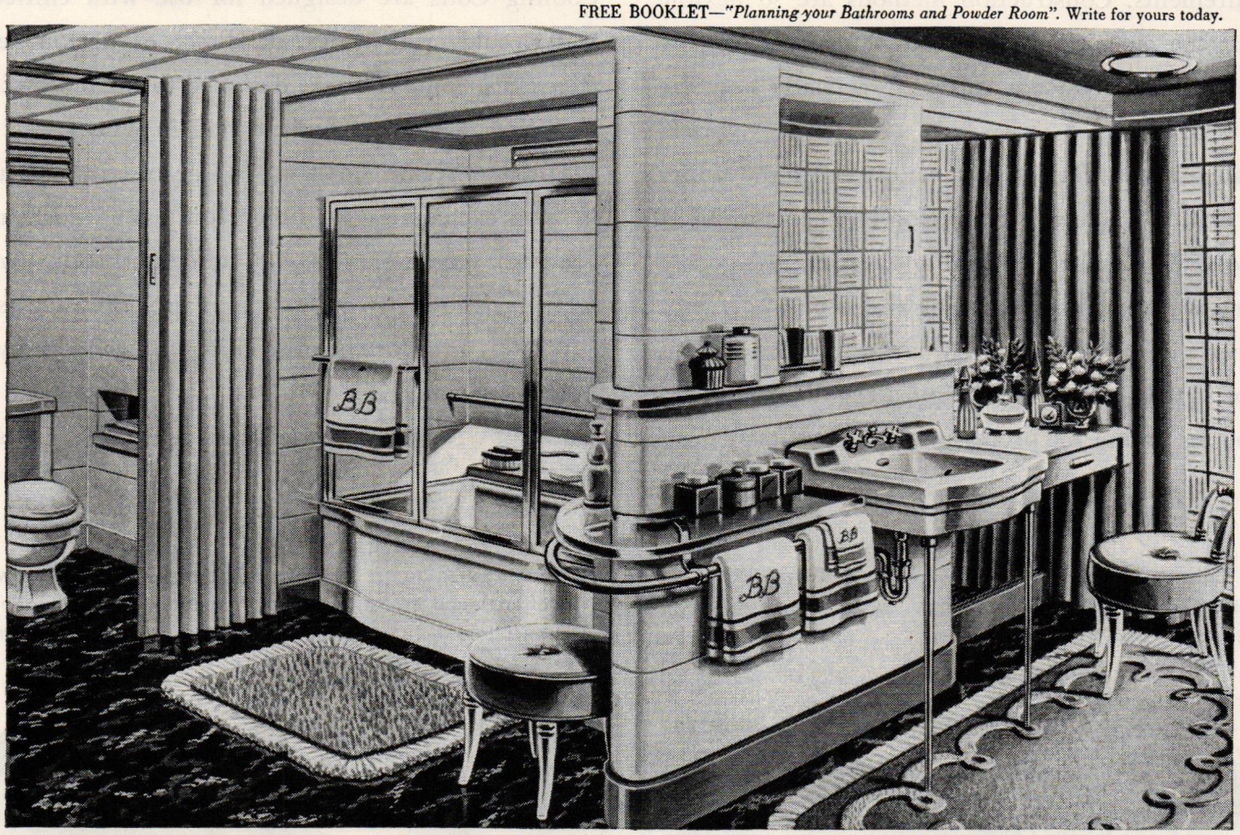


"THAT ULTRA-MODERN LOOK . . . *Just the thing I've been looking for to transform our old down-at-the-heels bathroom. Maybe we can't manage the glass brick wall . . . but the indirect lighting—tile partitions—and most of all, the gorgeous Briggs Beautyware would give me a bathroom I'd be proud to show the world!"*

"2-ROOMS-IN-ONE . . . *Now that's a really practical idea, especially for the early morning 'rush hour'. And the smart looking safety-bottom bathtub! All I can say is . . . somebody at Briggs must have had my harum-scarum kids in mind all the time!"*



FREE BOOKLET—*"Planning your Bathrooms and Powder Room"*. Write for yours today.



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"THOSE HEAVENLY COLORS . . . *Particularly in the plumbing fixtures! Who would think that anything so functional could be so pretty. And they tell me that despite their 'rich look'. . . any one of Briggs decorative designs and colors is reasonable enough for the most modest budget!"*

but they all agree on BRIGGS Beautyware

IT WON'T BE LONG NOW . . . until Briggs Beautyware is back on the market in quantities to suit every need and taste. The first of the completely postwar fixtures are off the production line and on the way to your local plumbing contractor. And when you see Briggs Beautyware you will agree they're the *smoothest* bathroom fixtures since plumbing became a profession!

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This advertisement, in full color, appears during 1946, in:
Better Homes & Gardens, March; Saturday Evening Post, April 20; American Home, May

A THOUSAND COILS
to meet a thousand needs

Standard Trane Coils are available in any number of sizes and styles to meet a broad range of requirements. Construction methods are so flexible that the most rigid specifications can customarily be met to produce a coil of practically any size or shape.

This unusual flexibility, coupled with the ability of skilled Trane manufacturing engineers to interpret even the most unusual application, has gone a long way toward establishing the recognized *world-wide superiority* of the Trane Coil in the heating, ventilating, air conditioning, drying and processing industries.

HEATING
See Trane Bulletin
DS-385

Trane Heating Coils are designed for use with either steam, hot water, or other liquids. Trane Cooling Coils are designed for use with chilled water, cold well water, or direct expansion refrigerants. Some coils are designed for dual service —cooling in summer and heating in winter.

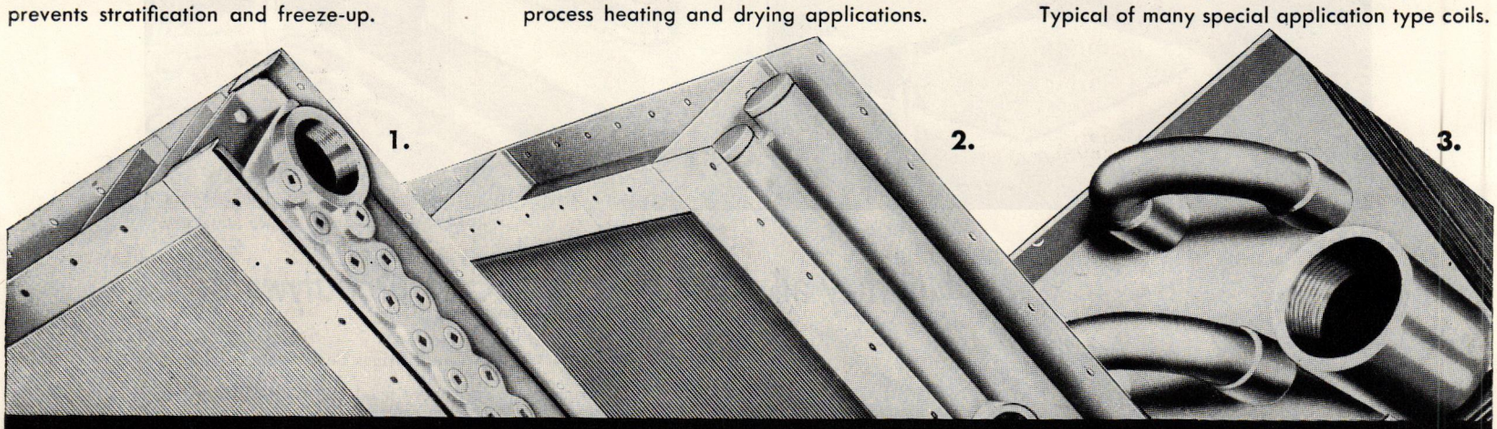
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2. Trane WH Coil. Welded construction to withstand higher pressures so often found in process heating and drying applications.

3. Trane Laundry Coil. Creates warm air for drying in laundry tumblers made by others. Typical of many special application type coils.



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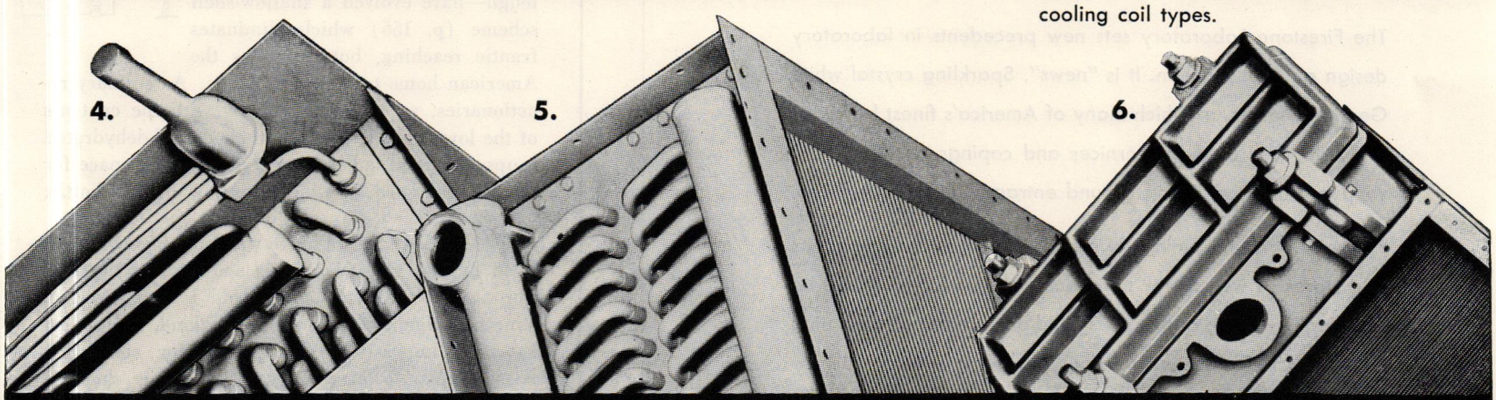
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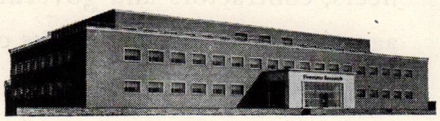
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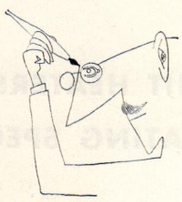
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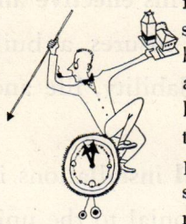
"The Marble with the **SPARKLING CRYSTAL"**

FORUM



Traditionally speaking, satire and architecture do not consort. Our newest contributor, cartoonist Saul Steinberg (p. 97) inherited the former and reluctantly acquired the latter at the University of Milan. He and architecture shared a brief Italian honeymoon which ended abruptly with the Steinbergian comment: "It's a silly occupation controlled by rich widows." So he took to satirizing Corinthian capitals and their widowed patrons. Of his now famous technique, he merely says he draws as he writes, with or without his eyes closed.

According to Freud, a persecution complex begins at home, but Carroll Meeks, who did the 19th century train shed study (p. 104), got his at Yale. As undergraduate instructor it was his job to collect problems from fellow students en charrette—a painful duty for a sensitive man. Booby traps sprang at him from dark corridors, bags of water dropped on his head and once with anguish, he discovered his own finished problem glued to the drawing board. Now in the safe position of Assistant Dean, he still shudders and passes hurriedly beneath open windows.

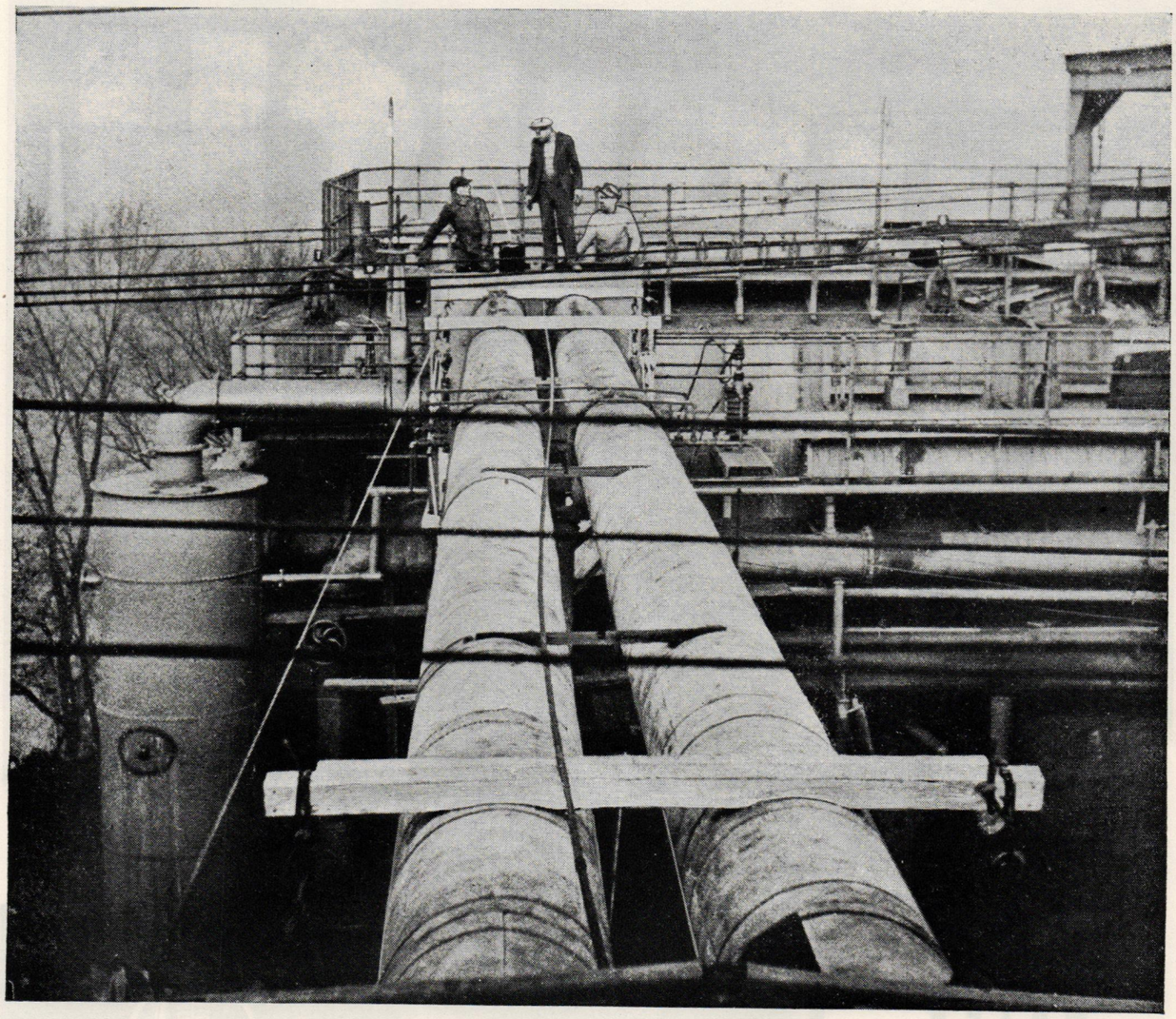


The steely eye of efficiency experts has at last alighted on that stronghold of grandma's cookie jar—the kitchen cupboard. Two brisk Cornell home economists—Mrs. Mary Koll Heiner and Miss Helen E. McCullough—have evolved a shallow-shelf scheme (p. 155) which eliminates frantic reaching, but dedicates the American home to packaged foods. As culinary reactionaries, we are pleased only with the contents of the lowest shelf. Here, in their den of dehydrated soups, the good ladies have slyly reserved space for the old-fashioned, or whistle-wetting, brandy bottle.



At best, designing is a nerve-wracking business, bollixed by last minute changes and slips of the pen. For Sgt. Ben Rosen, Cpl. Harold Jensen and Cpl. Vincent Solomita, stationed in England, it was just short of impossible. Their plan for converting Nissen huts to ease Britain's housing shortage (p. 110) evolved into a running fight with the commanding officer. Rosen and Jensen were forbidden time off and Solomita, the trio's architect, was sent to Germany. In spite of such odds, the final plans came winging from Eschwege in time to foil the C.O. and allow split-seconds for catching a ship home.





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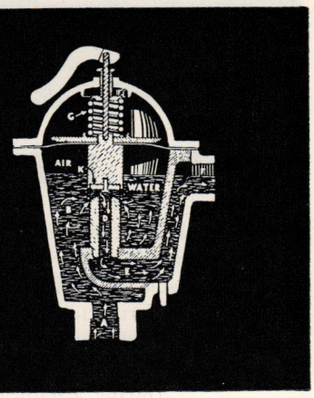
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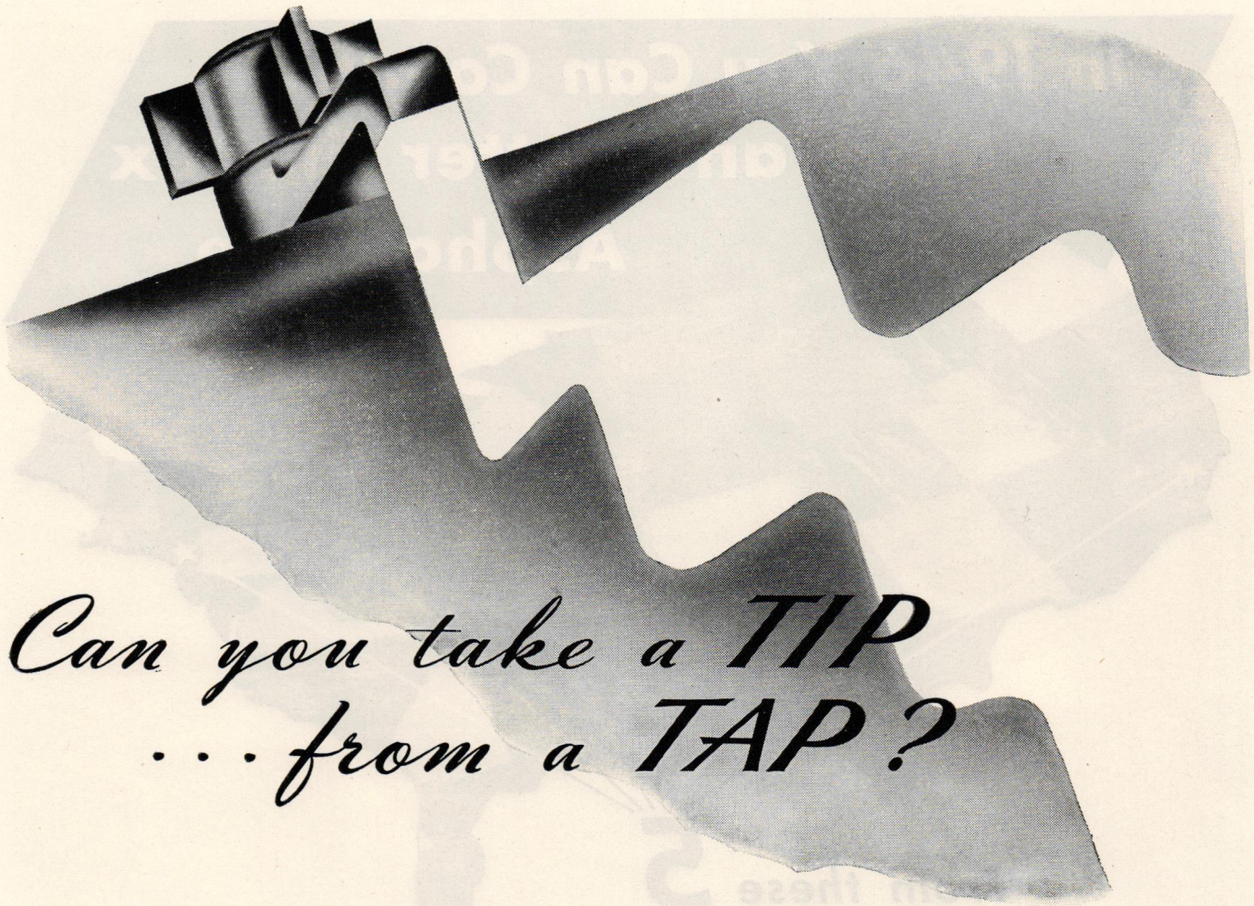


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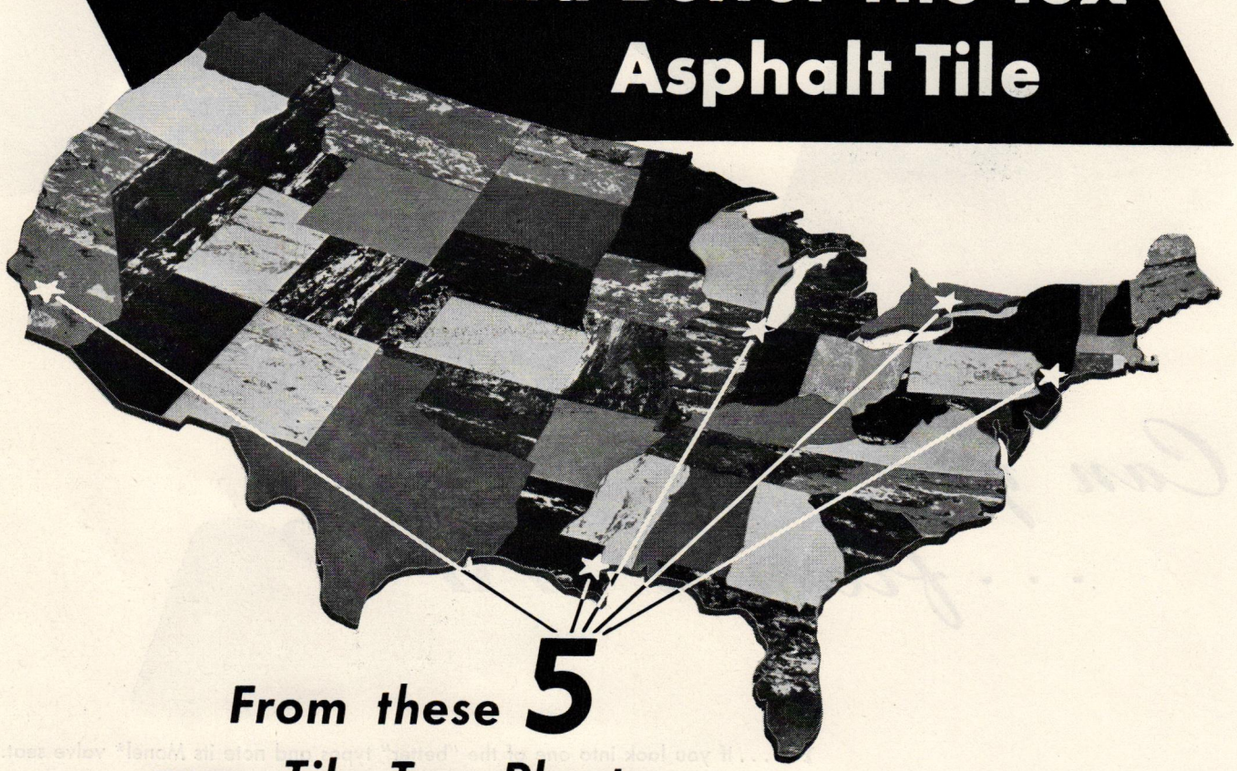
The full list of jobs for Monel is as long as your list of needs for a strong metal that resists rusting, corrosion and wear. So, whether you're specifying or okaying, be guided by this rule: *"If it's made of Monel, it will last."*

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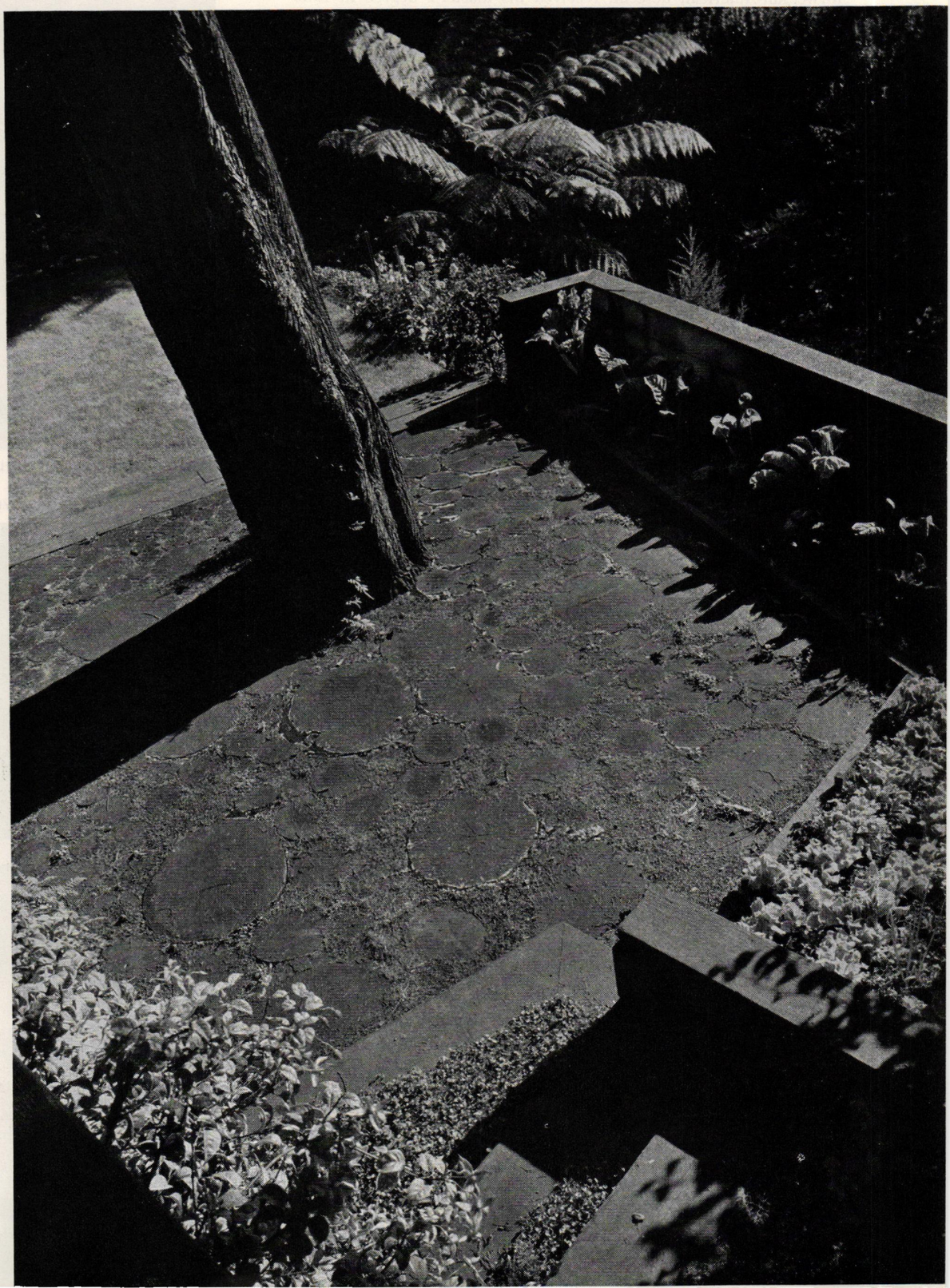
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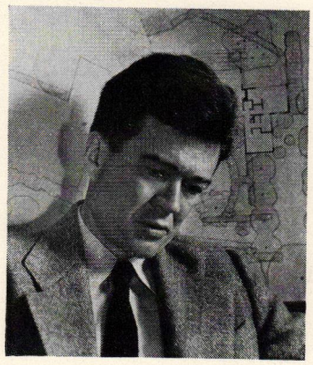
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The Architectural **FORUM** Magazine of Building



REDWOOD PAVING
MELLOWS LIGHT,
FORM AND TEXTURE



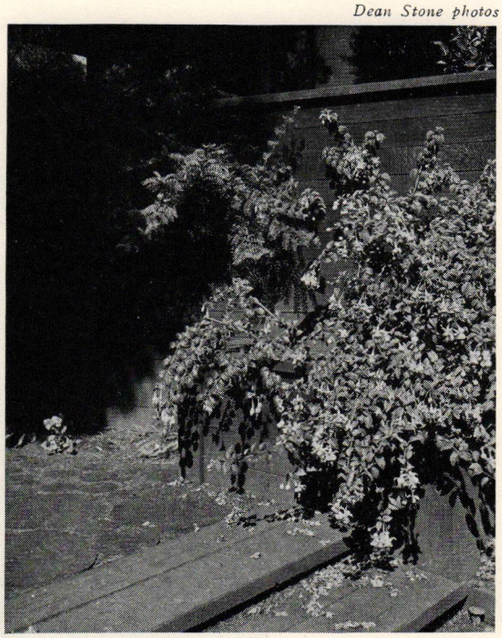
LANDSCAPE GARDENING I: The Small Lot

Garrett Eckbo applies rich planting and broadly organized space to the average garden.

Baseball and Eckbo were both born in Cooperstown, N. Y. He is of Norwegian-American descent, received his master's degree in 1938 from Harvard University and since the following year has been practicing in California with spectacular results. Today, he is considered one of the country's most gifted and competent landscape architects both for the boldness of his basic conceptions and for the excellence of his finished designs. A number of his theories were infused by the landscape architects who, in the '30's, abandoned the sham battle between formal axial and informal wiggly plan patterns for frank solutions of the site problems and materials used. But Eckbo, on his own, has gone far in his thinking and relating of plant material to the refined structural elements of contemporary architecture. His concept of a garden is a harmonious continuation of the house plan; a living pattern which flows indoors and out wherever people work, play and rest. And because of this approach, Eckbo and a number of his young colleagues champion inter-professional collaboration—architects and landscape architects working together on small jobs, architects, engineers and land planners on large public and industrial work.

While all of Eckbo's designs display breadth and imagination in the handling of space and outdoor construction, his innate feeling for plant material endows his gardens with an unusually sympathetic and vernal quality. In private life he limits himself to a tiny garden plot in self-defense against the beguilement of buds and slips, but in his practice he finds romanticism and sentimentality the greatest hindrance to sensible planting. "The garden," he says, "is not much different from the house. People don't change out of doors—they take their furniture, papers, food and toys with them." This down-to-earth side of his character can be seen translated in his generous use of paved areas, but though he recognizes the importance of easy maintenance, he does not put exaggerated emphasis on it. However, Eckbo does not view man as necessarily destructive to nature except in a single-minded pursuit, such as mining. Violently rejecting the old concept of formal versus informal, he derives most of his inspiration from the rural landscape where man and nature meet. Air views, to him, show free, roughly geometric land organization incorporating free, informal growth, a formula evident in most of his designs. Practicing in California, he has at his disposal notoriously fertile land and rich vegetation but his use of indigenous material and logical grading is a practical recipe for any part of the country. Landscaping is always more expensive than doing nothing to a site but this same technique allows Eckbo to work on a limited budget with rich results. In his gardens, plants are used, not in decorative terms, but as architectural components in the shaping of outdoor space. The factors governing their selection are listed under five headings: culture (soil and water), ultimate size, silhouette, texture and color (foliage, bark, blossoms, fruit and fragrance). To Eckbo, there is nothing mystic or lofty about landscape architecture. He sees it as the logical enrichment and integration of man-made structures with their natural surroundings.

Dean Stone photos

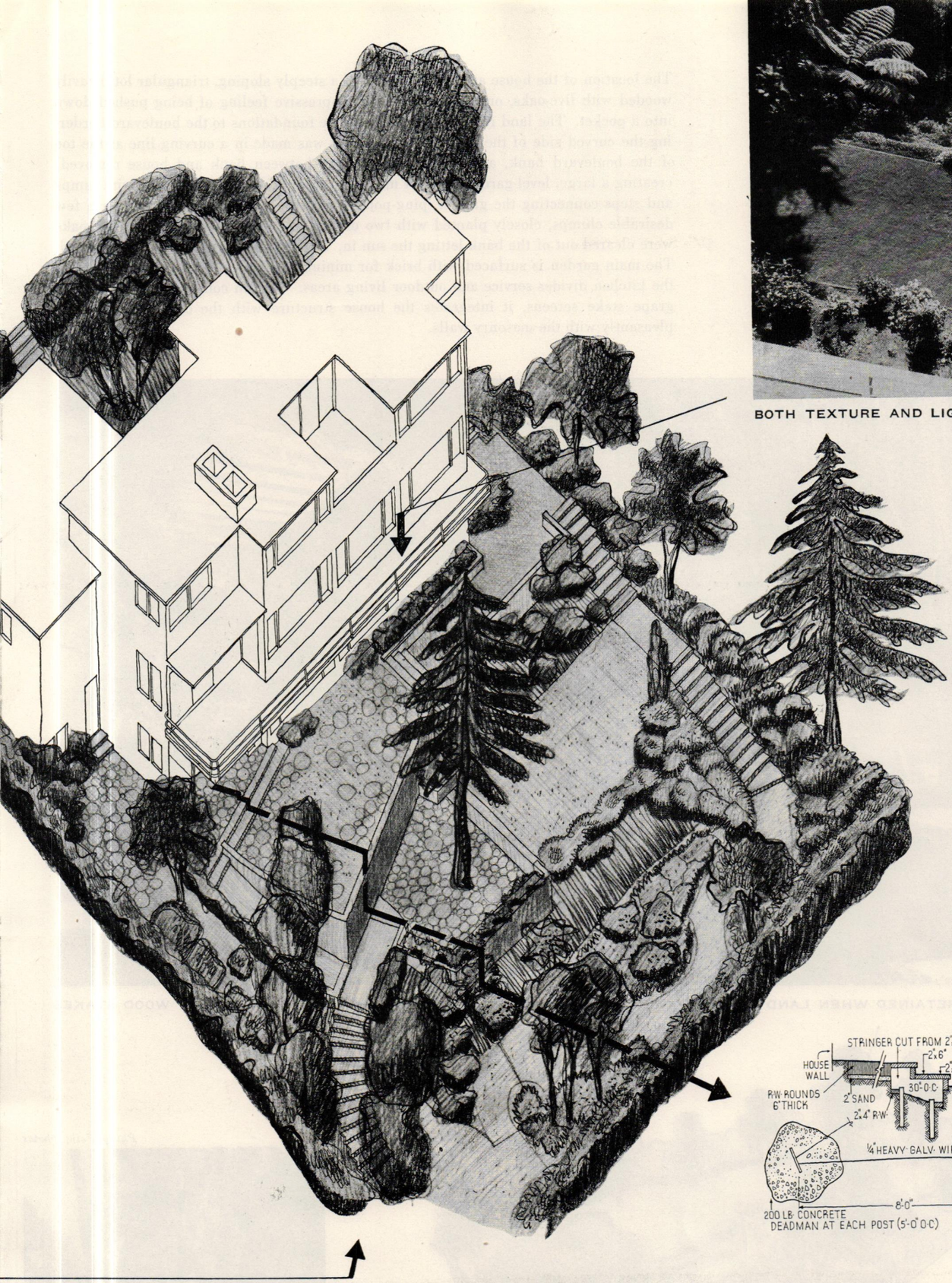


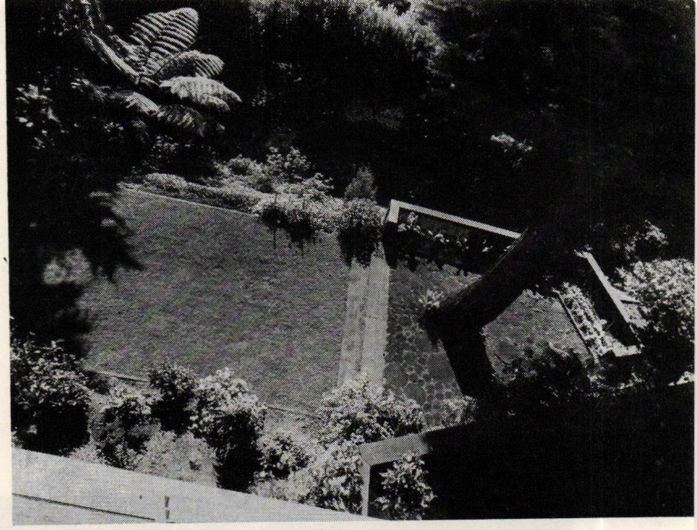
REDWOOD WALL BOX PLANTED IN FUSCHIA



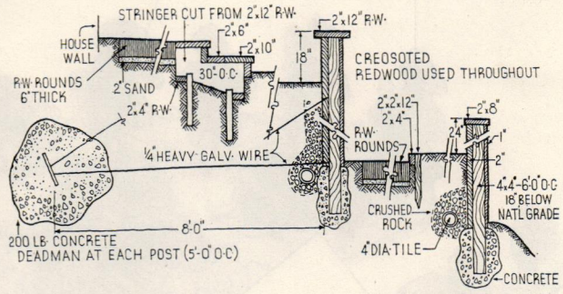
EXISTING MONTEREY CYPRESS IS USED AS FOCAL POINT OF GARDE







BOTH TEXTURE AND LIGHT RUN GAMUT OF VALUES



PLANTS AND STRUCTURE BORDER STEPS

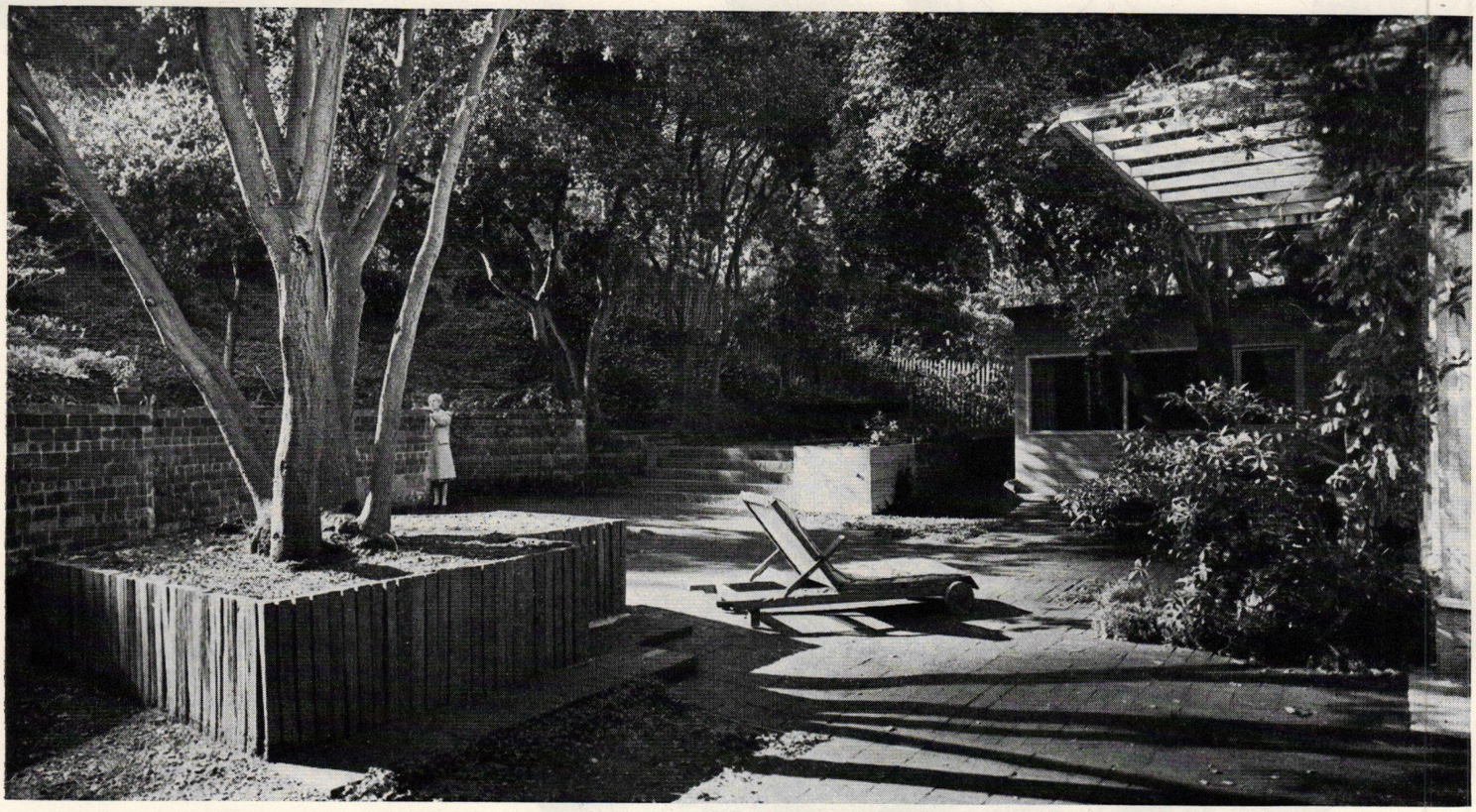


Most elaborate of the four Eckbo gardens shown is this hillside one which depends largely on its structural elements for form. While terrace shapes and levels are closely related to the original topography, grading provided much additional planting and living space. The chief problems were: 1) establishment of circulation throughout the site, 2) proper location of a choice collection of rhododendrons and azalea, and 3) disposal of earth removed from the house excavation. Three terraces connected by steps and ramps were the logical solution. Construction throughout is of redwood—walls, steps and paving—because of its durability and economy (in California). As a whole, the garden expresses admirable use of existing trees and views and a pleasing play of line and form.

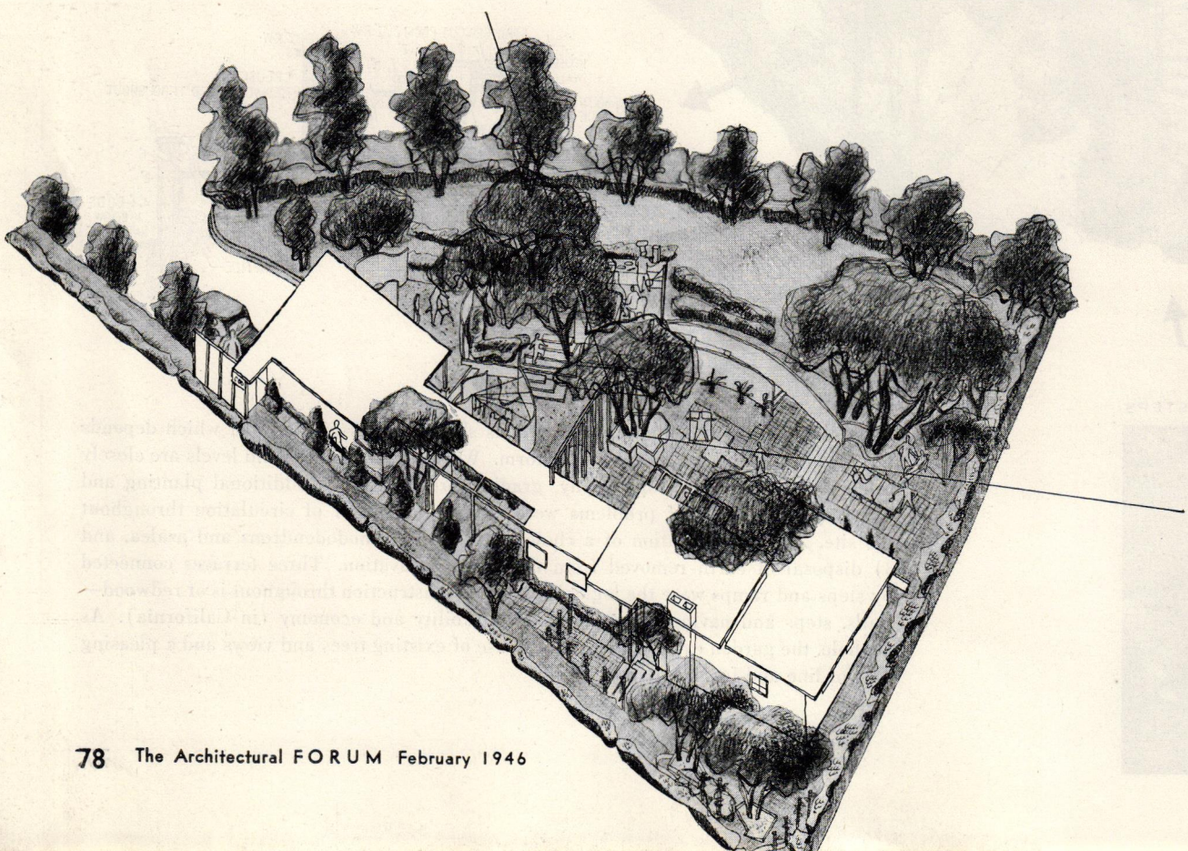
Bold grading and construction shields property from adjacent street, opens its deep-set interior to sun and air.

GARRETT ECKBO, Landscape Architect

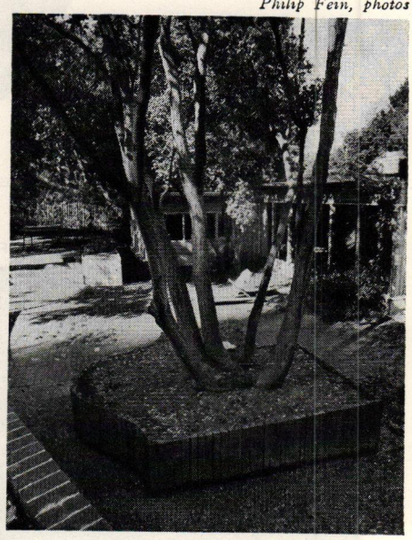
The location of the house at the low corner of a steeply sloping, triangular lot, heavily wooded with live-oaks, originally gave it an oppressive feeling of being pushed down into a pocket. The land rose irregularly from the foundations to the boulevard bordering the curved side of the site. A four foot cut was made in a curving line at the toe of the boulevard bank, and the wedge of earth between bank and house removed, creating a large, level garden area. A masonry retaining wall was installed with ramps and steps connecting the garden, ping-pong and barbecue terraces. Except for a few desirable clumps, closely planted with two or three other kinds of trees, the live oaks were cleared out of the bank letting the sun in. Native ground cover was then planted. The main garden is surfaced with brick for minimum maintenance. A high trellis off the kitchen divides service and outdoor living areas. Used in conjunction with curved grape stake screens, it integrates the house structure with the outdoors, contrasts pleasantly with the masonry walls.



HANDSOME OAK TREE WAS RETAINED WHEN LAND WAS CUT AWAY, ITS MOUND SUPPORTED BY A FREE SHAPED BOX OF WOOD STAKES



Philip Fein, photos



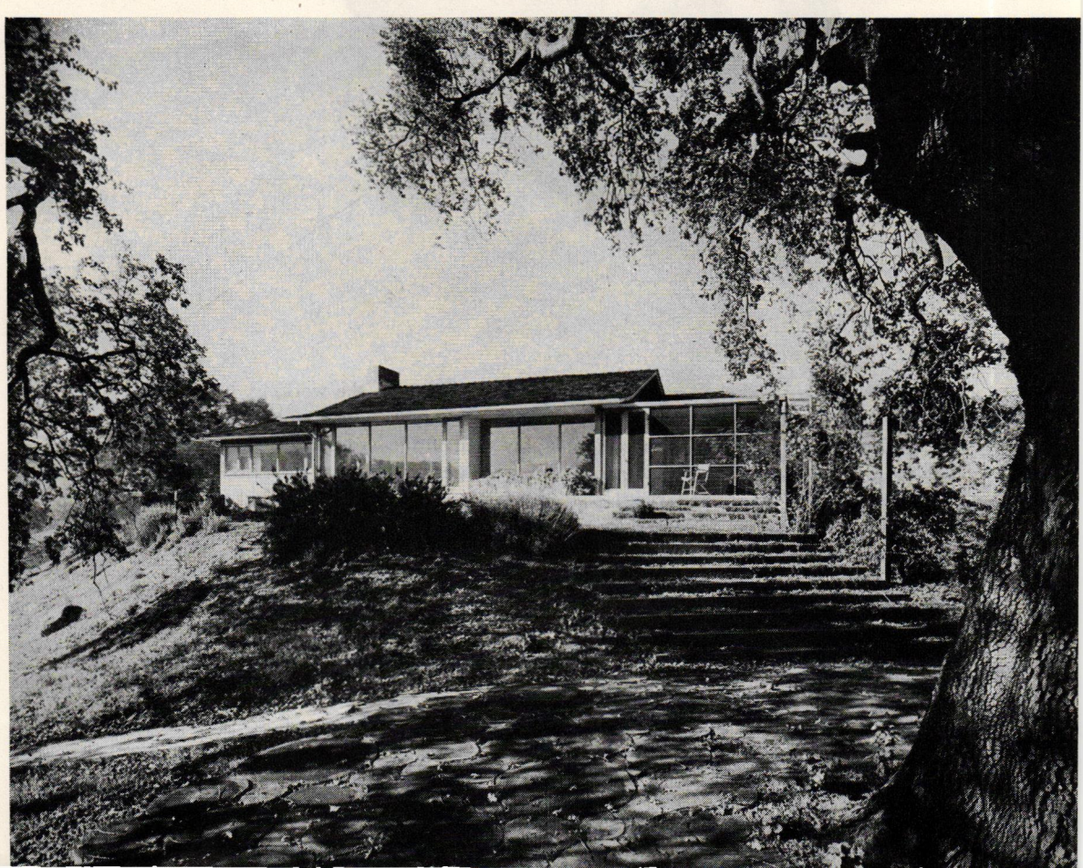
Luxuriant growth adapted to a geometric plan blends man's succinct structure and nature's unrestrained site.

GARRETT ECKBO, Landscape Architect



BROAD STEPS AND MAIN TERRACE, LOWERED FOR ADEQUATE OUTDOOR SPACE, ARE PLANTED IN FRAGRANT, HARDY CREEPING THYME

This hilltop house enjoys a dramatic mountain view to the east, seen through and under the branches of the magnificent weeping oak shown in the foreground of the isometric plan. The land continues up to the west of the house, drops off on the other three sides to flat meadowland bounded by a creek. Steps lead up the north side of the knoll from a short driveway, motor court and garage to a flat, planted entrance garden which was cut into the ridge to better relate house and site and to eliminate a visual illusion of sliding off the knoll. This part of the design creates an intimate entrance garden as a foil to the openness of the living side of the house. A service yard was terraced into the slope between the house and garage and screened with a curving grape stake fence. The steps of the main terrace, bordered by redwood posts supporting climbing roses, lead down to a smaller circular terrace under the oak which is surfaced in redwood butt.



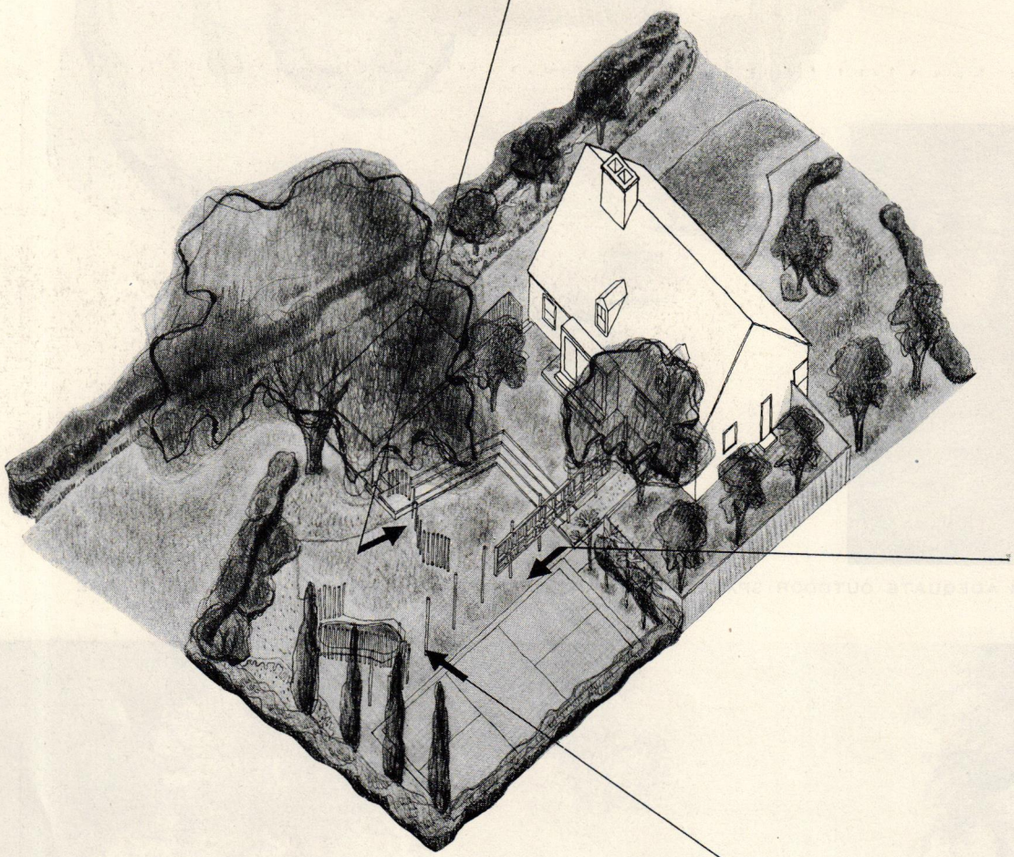
Freestanding architectural features organize the use and sharpen the interest of a level, rectangular site.

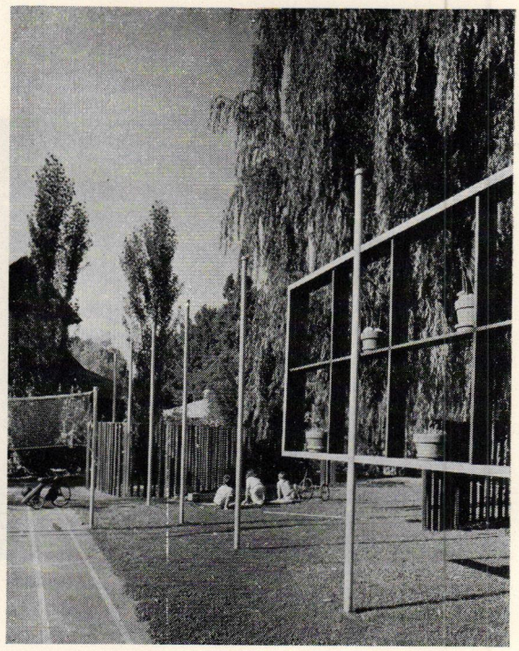
GARRETT ECKBO, Landscape Architect



BROAD, LOW REDWOOD STEPS SURFACED WITH RED ROCK JOIN TERRACE AND LAWN

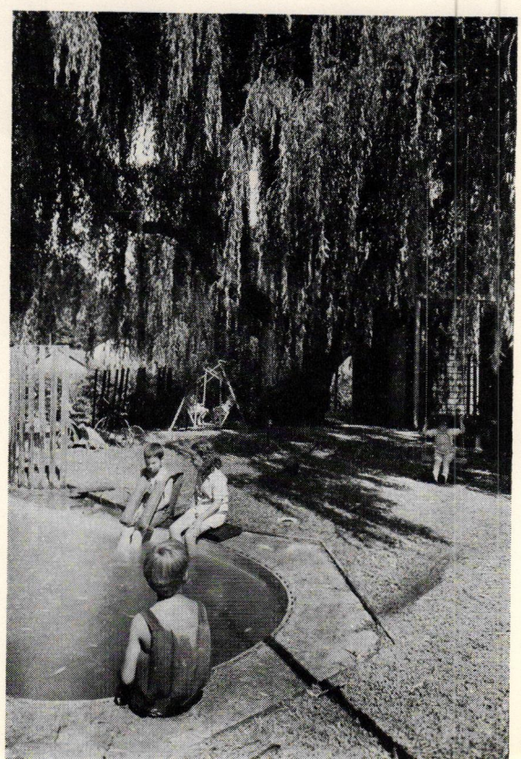
Esther Born photos





TRELLIS ADDS A CRISP SENSE OF ENCLOSURE

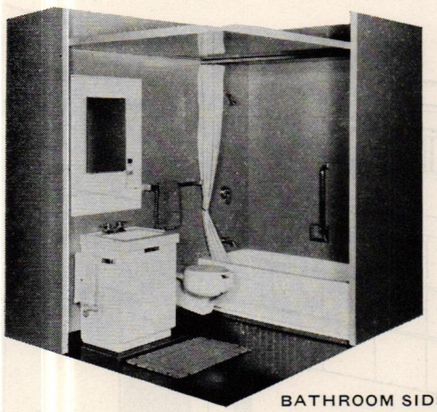
SUN AND SHADE BORDER TOTS' WADING POOL



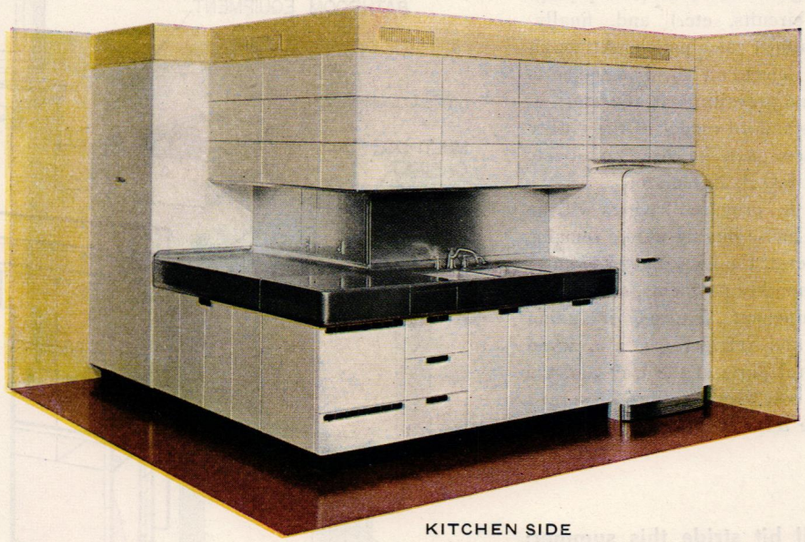
To make it truly utilitarian and integrate the entire lot with the working, living and private spaces of the house was Eckbo's basic idea in laying out this plan. There is a rear living terrace in the lee of the house, a play yard off the children's room, an active game court, a general free lawn area containing the wading pool and a service yard, all admirably interrelated. The large, L-shaped terrace was built up to connect the house and garage since both were constructed about two feet above grade. The entire garden is dominated by an imposing willow tree whose massiveness contrasts with a row of fine pipe poles, hinting a boundary between the paved play court and the center lawn space. Trellises hung from the poles extend the structure of the house into the garden, enclose the space and serve as shelves for potted plants. The screens in the lawn area are composed of grape stakes, the curve of one screen tying in with the free form of the wading pool.

HOUSE EQUIPMENT PACKAGED to save space, ultimately money.

Borg-Warner's Ingersoll consolidates all utilities in a unit, tries it out in 12 new houses.



BATHROOM SIDE



KITCHEN SIDE

Since the day plumbing moved indoors, the house building industry has recognized the economy of closely grouped utilities. Back-to-back kitchens and bathrooms have always been the hallmark of penny-wise builders. During the past fifteen years many a forward looking designer has gone still further, developed for prefabrication a so-called mechanical core containing all or most of a house's utilities. While some of these ideas reached the mock-up stage, none went into production. Not until this month will the industry preview the first mass produced mechanical core when the Ingersoll Utility Unit is unveiled simultaneously at the annual convention of the National Association of Home Builders in Chicago and at the manufacturers 12-house proving ground at Kalamazoo, Mich.

Produced by Ingersoll Steel & Disc Division of Borg-Warner Corp., the Utility Unit is comprised of two major parts: 1) a factory fabricated core containing furnace, water heater, plumbing and electrical circuits and 2) the fixtures which normally appear in any well equipped kitchen, laundry and bathroom but which are integral parts of this smartly designed Unit.

Introduction of the Utility Unit is a good thing for the building industry. It holds significance for most every branch:

- For the builder it means easier, more rapid construction and lower costs.
- For the architect it provides an economical factory-made design for part of the house, yet allows him a free hand in the arrangement of the house's major elements.
- For the lender it means the writing of larger mortgages covering several built-in kitchen and laundry fixtures which heretofore, as moveable accessories, have ordinarily been financed by the relatively high cost, short term loans of commercial banks.
- For the prefabricator of houses who is willing to subcontract his utilities, it may be the solution to one of his knottiest problems. (One leader in the field has already seen it this way, has placed an order with Ingersoll.)
- For building labor and particularly its plumbers, the new unit with its factory assembled core offers only the possibility of more construction through lower costs. (However, the manufacturer is using AFofL plumbers in the factory production of the core, offering them the benefits of year-round employment.)
- For the dealer alone the new product means nothing—it will be sold direct from manufacturer to builder.
- For the industry as a whole, currently beset by soaring costs, Ingersoll's efforts to lower the cost of house utilities are welcome. Original goal was to produce the package of utilities at a price 20 per cent below the cost of buying and assembling comparable equipment in the conventional manner. Certainly,

Borg-Warner reconverts

Introduction of the Utility Unit will permit Borg-Warner to sell many of its household appliances in a single package. In the last pre-war year (1941) B-W devoted 24 per cent of its attention to the production of such appliances, including ranges, refrigerators, washers, furnaces, water heaters and oil burners. During the war all of its production was devoted to a long list of war tools ranging from the GI's trusty fox hole shovel to the mighty "Beach Buster", an amphibious tractor which was produced in the Kalamazoo plant now retooling for the mass production of the Utility Unit.

Long prior to Peace, Division President Roy C. Ingersoll planned for the reconversion of these expanded production facilities. A year and a half ago he was introduced to Peoria Architect J. Fletcher Lankton and his proposal for a prefabricated mechanical core as the vehicle for a packaged utility unit. After preliminary research, Ingersoll was thoroughly convinced that the proposal would be a good thing for the building industry, the public and for Borg-Warner, of which he is a director and executive committee member. But B-W was not as easily convinced. Fighting initial corporation skepticism, the tenacious Ingersoll finally persuaded the parent corporation that production of the Utility Unit was a worthwhile gamble despite the fact the B-W in its strong financial position (current assets: $115 million) did not have to gamble.

some saving was to be expected, reflecting those which Ingersoll will effect through the manufacture of many of the unit's parts, through the purchase in wholesale lots of the other parts, through mass production of the unit's core, through the economies inherent in the compact design of the Unit (less piping, shorter wiring circuits, etc.) and, finally, through a streamlined sales policy. Although final pricing will depend on raw material costs and other factors prevailing at the start of production, the standard model of the Utility Unit shown on these pages has been tentatively tagged at $1,300 F.O.B. Kalamazoo.

How much of the promised savings will be passed on to the house buying public remains to be seen. However, the house buyer is guaranteed smaller monthly payments, since all of the Unit's component fixtures, including clothes washer and refrigerator, are, when assembled, integral parts of the Unit and the house, and their cost may therefore be spread out thin over the term of the mortgage.

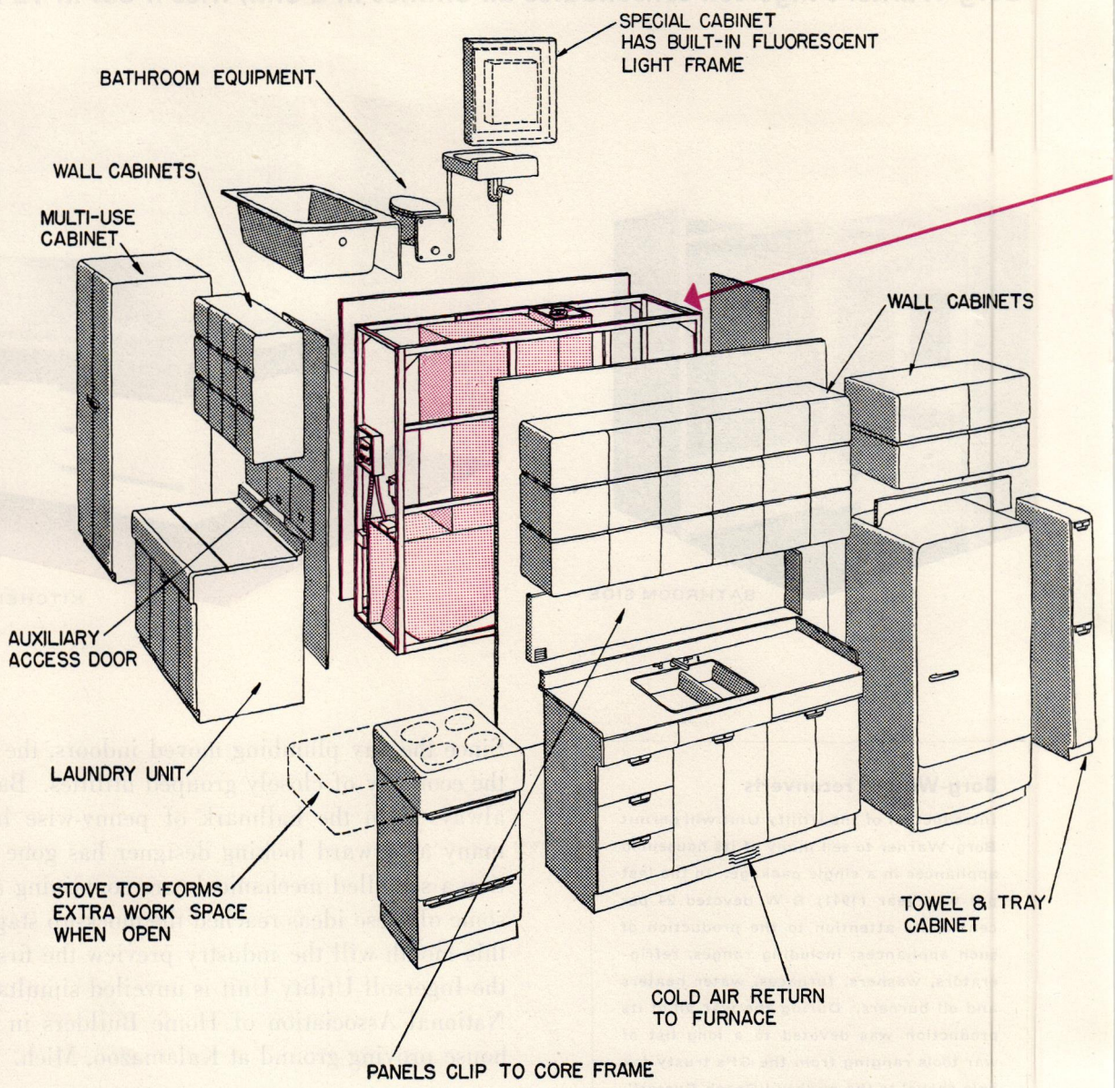
Production will hit stride this summer; big builders will benefit first.

Although eager for such economies, the industry and the public must wait. Like everything else being produced by reconverted industry, Ingersoll's new product cannot be delivered immediately. Eventually, three or four B-W plants may be retooled for its production, but the one being retooled today will not start mass production before spring. However, Ingersoll hopes that this Kalamazoo plant will be turning out 500 units a month by midsummer, has set his production sights on a target of 6,000 Units for 1946.

Chances are that all of this year's output will go to large scale builders, for the company's policy for the present is to accept only orders for 50 or more Units. There are several good reasons for this: 1) Such builders are in a better position to bargain with labor. 2) Concentration of sales in groups of at least 50 will simplify the complicated problem of servicing them. 3) Mass sales and deliveries will facilitate mass production and permit lower costs. Sometime in the future smaller builders may enter the market, order as few as one at a time. Then, through his builder, the individual who is building a house may also order his Utility Unit.

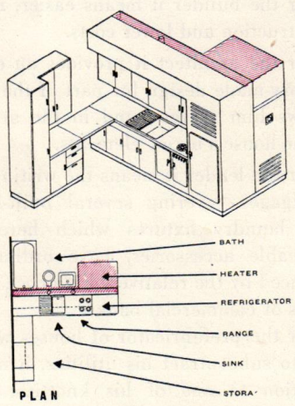
Most of the credit for the development of the packaged utility equipment goes to Roy C. Ingersoll, and a few others. Among these were Industrial Designer Donald Deskey whom Ingersoll retained last May to assist in the design, production and promotion of the new product. Deskey Associates had already conceived a prefabricated utility package similar in many respects to Ingersoll's. So, the design of the Utility Unit is the result of the threefold collaboration of Architect Lankton, Ingersoll's engineers and Deskey's designers headed by Partner Leonard Keller, director of the Product Design Division.

(Continued on page 84)



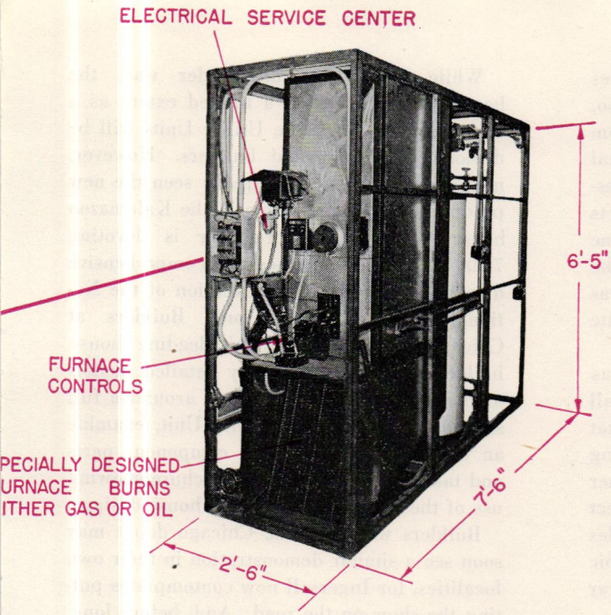
UTILITY UNIT is a compact assembly

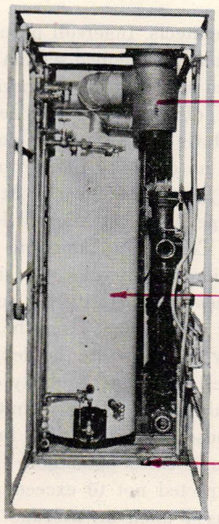
FORUM readers saw it coming.



Even prior to its "Integrated House" issue of April 1937 the FORUM reported numerous proposals for prefabricating a mechanical core and for partially integrating the utilities and equipment of a small house. The FORUM in that issue suggested the complete integration of utilities, offered its own design for a "power plant" (left). Interestingly, the FORUM's description of its 1937 power plant also fits the Utility Unit. Said the FORUM: "Such a unit might include in one housing all the bathroom and kitchen fixtures for a small, single story house as well as water heater, heater, ventilating equipment, etc. . . . The power plant would . . . be designed for quick and easy assembly of its several parts."

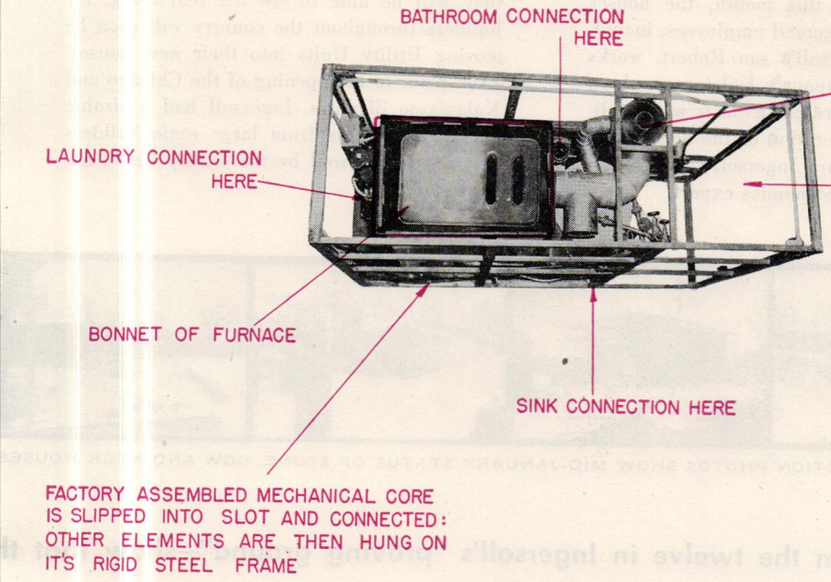
Intervening years saw no practical application of the power plant idea, but in January 1943 the FORUM again raised the issue, predicted its postwar acceptance: "The idea of a completely prefabricated mechanical core . . . will undoubtedly reappear in various forms".

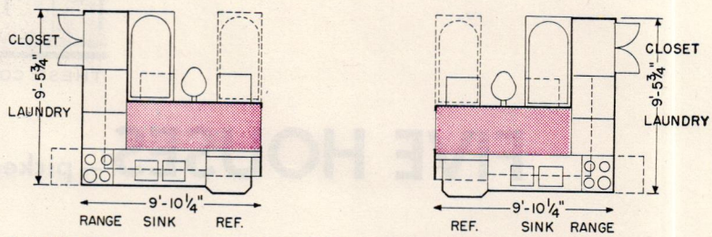






THREE STEPS IN INSTALLATION





REVERSAL OF PLAN AND INTERCHANGE OF BATHROOM FIXTURES

f kitchen, laundry and bathroom equipment around a mechanical core.

The history of invention is full of controversy—claims and counter-claims to the cotton gin, the steam boat, the telephone, the sewing machine. This is fortunately not the case with the Ingersoll Utility Unit: like all the products of modern science and industry, many men have contributed to its birth, and they freely admit it. Collectively, they have overcome many problems of design, production and use.

These men have ingeniously consolidated in a 9½ ft. square area all of the essential utilities required for the kitchen, bath and laundry for a house of average size. In many respects the Utility Unit is similar to its Canadian counterpart, the "Unitility" (Arch. FORUM, Jan. '46, p. 171) which is produced by the Canadian Comstock Co.: although also sired by Architect Lankton, it is otherwise unrelated to the Ingersoll progeny. The U. S. version is larger than the Canadian, covering a floor area measuring 9½ x 9½ ft. against 7½ x 7¾ ft. However, since the "Unitility" is delivered to the site in one bulky piece, it requires that the assembly be in place before the house is completely walled in, while the Ingersoll is shipped in easily assembled pieces, all of which will go through a standard doorway. Largest piece of the Ingersoll Unit is its central core measuring 30 x 90 in. and standing 77 in. high. It can be rolled into place on a few lengths of scrap pipe. All other parts are easily hand-carried and are hung separately on the core's welded steel frame or connected to its prepared fittings. Designed as a unit, the various kitchen-laundry parts, when assembled, present a much more unified appearance than the unrelated fixtures in a conventional installation. Both appearance and function will be further improved when the refrigerator now on Deskey's drafting boards is eventually incorporated in the Unit. As now proposed, it will provide refrigerated drawers below the level of the counter and a set back refrigerated cabinet above, will thus increase the Unit's counter area. Meanwhile, to permit more rapid production of the Unit as a whole, a stock 7 cu. ft. refrigerator is included in the package along with filler strips which connect it with surrounding elements.

In the engineering of the Unit, provision has been made for meeting varying local fuel conditions and for adapting its layout to a wide range of conventional floor plans. Thus, the furnace will be provided with either a gas or oil burner, and the range and water heater may be either gas or electric. By reversing the plan of the Unit and by interchanging the bathtub and the lavatory, four different floor layouts are possible. Moreover, by eliminating the multi-purpose cabinet the bathroom door may be placed in either of two walls.

Ingersoll proves his pudding in Kalamazoo houses by eight architects.

To field-test the design and operation of the Utility Unit, to demonstrate its flexibility and to create a full scale show room for the new merchandise, Ingersoll last summer commissioned eight architects to design 12 houses of various styles, sizes and costs, then built them in Kalamazoo. The project has also proved to be a much headlined introduction to Ingersoll's grand promotional campaign. In these days of slim pickings, the mere completion of 12 new houses would make headlines anywhere; designed, as they are, by some of the country's leading architects, these 12 will command nationwide attention. Never before have there been built side by side the houses of such experts as Dow, Harris, Keck, Stone, Stubbins, Wills and Yost. Less known but most familiar with the Utility Unit, Architect Lankton designed three more.

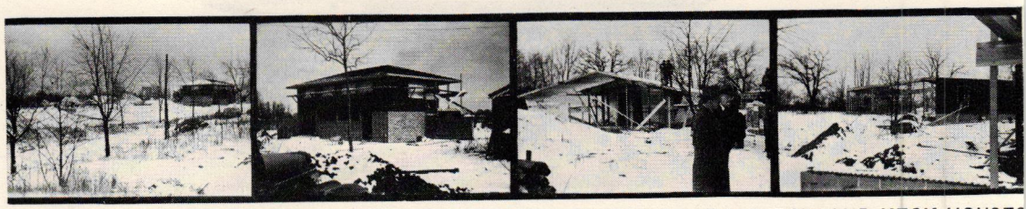
All these purposes and promotional advantages were in the minds of publicity-wise Donald Deskey Associates when they suggested such an architectural project to Ingersoll. While Deskey was selecting the big-name architects, Ingersoll purchased 10 acres in a partially developed section of Kalamazoo, appointed a construction superintendent from his staff of engineers and designated local Miller Davis Co. as general contractor. Deskey had no difficulty lining up his architects at a flat fee of $2,000 each. At the same time Landscape Architect Michael Rapuano of the firm of Clark, Rapuano and Holleran was commissioned to develop the site plan, locate the houses and beautify the scrubby lots.

Major requirement given the architects was that they "demonstrate the flexibility of small house design around a utility core" and that they "publicise the Utility Unit by presenting it in houses designed with broad consumer appeal and sales potential". Each architect was instructed not to exceed a certain sales price based upon an average cost per cubic foot which put the houses within the prewar $4,000-$8,500 bracket.

When completed this month, the houses will be rented to Ingersoll employees, including President Ingersoll's son Robert, works manager of the company's Kalamazoo plant. Other tenants who are particularly well qualified to study the operation of the houses and their Utility Units are Ingersoll's chief engineer and his home economics expert.

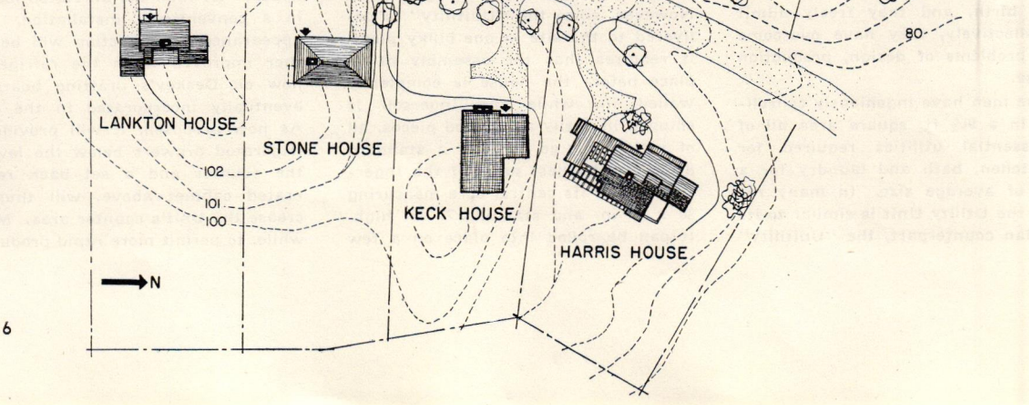
While these tests are under way, the houses will be used to a limited extent as a show room in which the Utility Units will be demonstrated to invited builders. However, most builders will have already seen the new product and its application in the Kalamazoo houses, for the manufacturer is devoting 7,200 sq. ft. of floor space to a comprehensive display at this month's convention of the National Association of Home Builders at Chicago. There the nation's leading house builders will see elaborately detailed models of the Kalamazoo houses, walk around a full size installation of the Utility Unit, examine an exploded display of its component parts and take away with them a brochure showing use of the unit in 38 additional house designs.

Builders who miss the Chicago debut may soon see a similar demonstration in their own localities, for Ingersoll now contemplates putting the show on the road. And, before long, they will be able to see the real thing, for builders throughout the country will soon be moving Utility Units into their new houses. Even prior to the opening of the Chicago and Kalamazoo displays, Ingersoll had a sizable backlog of orders from large scale builders who have been sold by the Utility Unit's advance publicity.

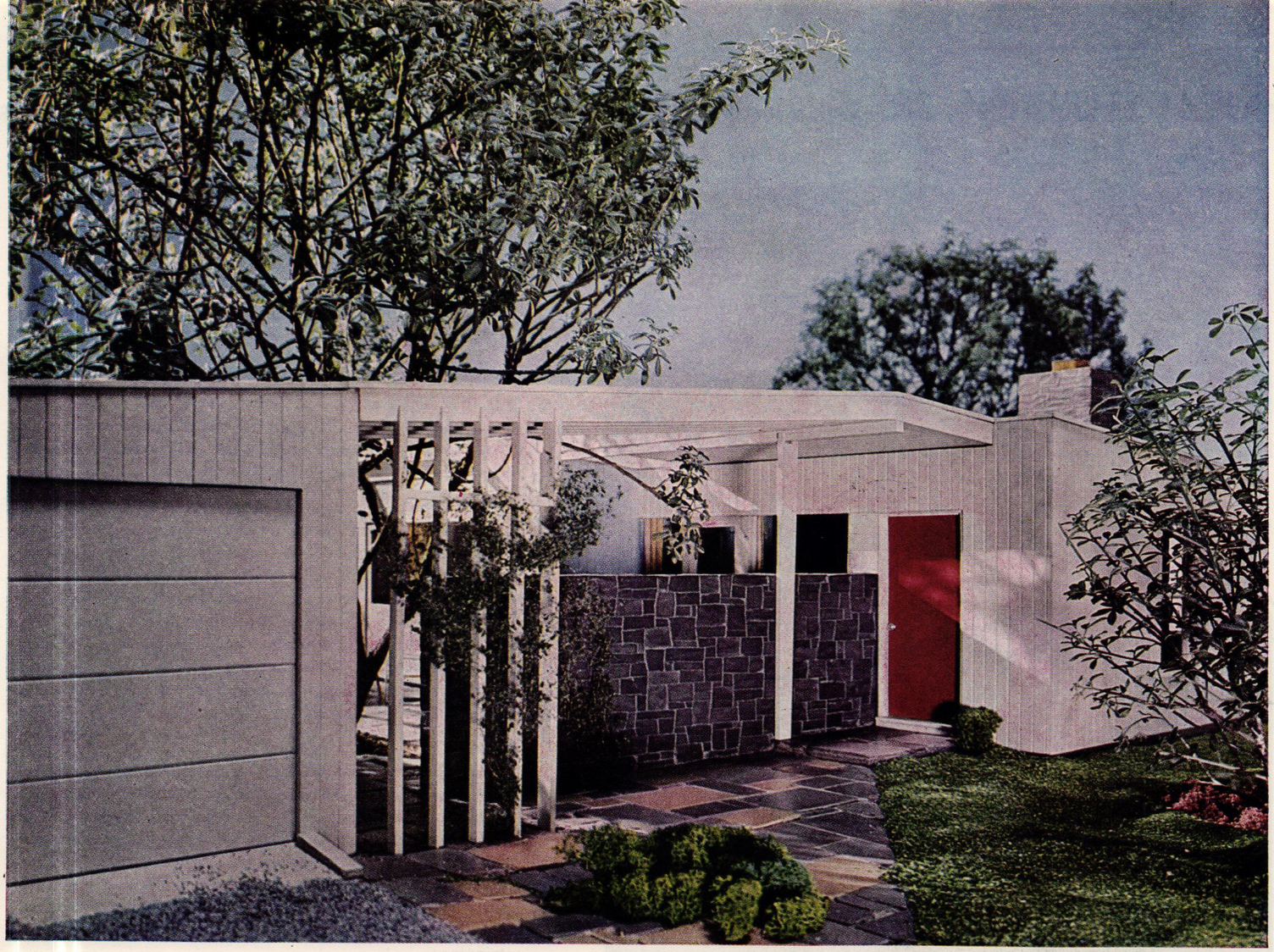


THESE CONSTRUCTION PHOTOS SHOW MID-JANUARY STATUS OF STONE, DOW AND KECK HOUSES

FIVE HOUSES —picked from the twelve in Ingersoll's "proving ground"—show that th



EXISTING STREET and utilities determined the main lines of Michael Rapuano's site plan for the Kalamazoo project. Ten of twelve test houses are located here (two additional houses by Lankton are on separate plots nearby). Shown on following pages are the larger versions of the Stubbins and Dow houses and those designed by Yost, Stone and Harris.



WITH SIMPLE ARBORS AND MASONRY WALL, HUGH STUBBINS HAS CREATED A CHARMING COURTYARD FOR A SMALL ECONOMICAL HOUSE

tility Unit in the hands of competent architects is no obstacle to good design.

All photos Ezra Stoller

The houses shown on this and the following pages are among the very first of the postwar crop. This fact alone gives them unusual significance; but they happen also to be good designs, noteworthy for their intelligence, honesty and realism. They were conceived while the war was still raging and begun as soon as it was finished. They thus necessarily reflect the grim realities of building today. But that they exist at all is a tribute to Ralph Gulley who—as head of Deskey's Architectural Division—had the task of integrating and coordinating the work of the many specialists involved.* The houses as finished reflect this process. At every stage of their development they were reviewed by the Deskey office, by Ingersoll's purchasing department and production men. Many of the changes which resulted were aimed at better adapting the houses to their lots and relating them to each other. Other modifications were sometimes involved. Reviewing the original designs, Mr. Ingersoll suggested that "the group as a whole should stick closer to the middle of the road if we are to meet the preferences of a large enough number of people to 'sell' the houses and the Unit." At the same time, however, it was wisely suggested that each design include "some unique feature which would attract attention and serve as a talking point for publicity."

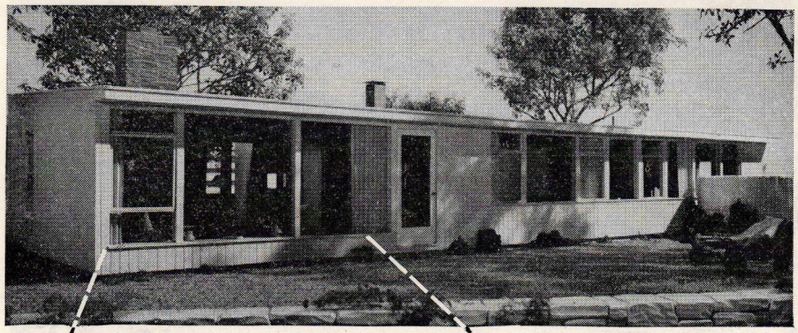
Never for a moment losing sight of the fact that it was the small house which offered the largest potential market for his Unit, Ingersoll kept the houses small—they range in size from 6,200 to 16,400 cu. ft., and would cost from $4,650 to $12,300 to duplicate based on an average estimated cost of about 75c per cubic foot. Since they are designed for national publicity, they wisely cover a wide range of geographic considerations and stylistic preferences. The various installations of the Unit were deliberately varied: some burn oil, others gas; heating capacity varies widely;** they use various methods of distributing the heated air, including George Fred Keck's radiant floor system; all four variations of the standard Unit's plan are demonstrated; one unit is on the second floor and one unit is expanded with auxiliary equipment to form a custom kitchen.

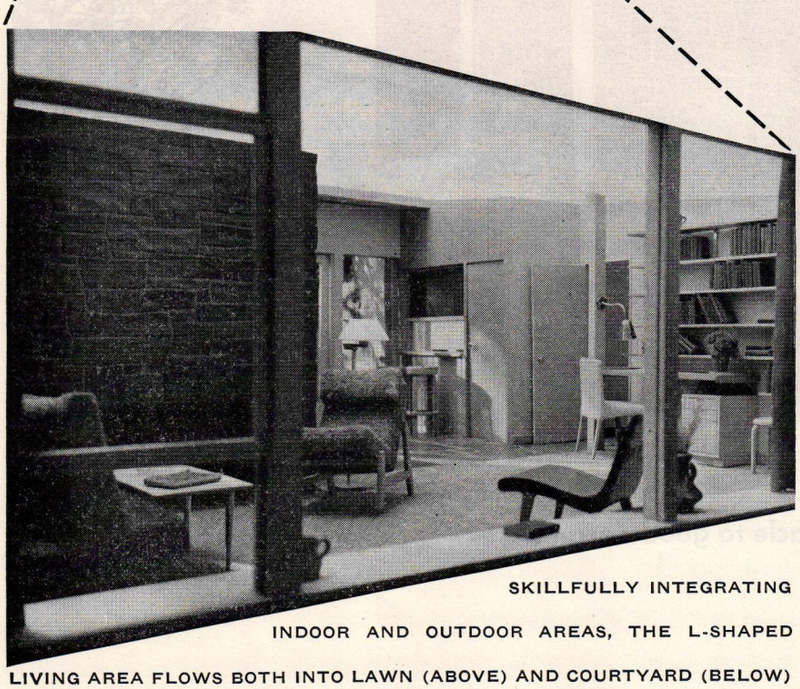
Despite these variations, however, the houses have many qualities in common—not least of which is the ease with which they absorb Mr. Ingersoll's new Utility Unit. On that count, he can consider his experiment already successful. For all the houses prove that the Unit neither limits the designer's imagination nor freezes the floor plan of his houses.

* Other personnel of the Deskey Associates who have been responsible for important phases of the development program are: Frank S. Bache—construction and research; Clifford B. Curtis, Architect—architectural co-ordinator; Dwight LaBarre—product design engineering; Harold E. Leeds—architecture and house models; Walter H. Smith—house decorating and furnishings. Deskey's consultants were: A. Lawrence Kocher, Architect; Professor Richard M. Bennett, Yale School of Architecture; Dr. Elaine Knowles, Home Economist, Teachers College, Columbia University.

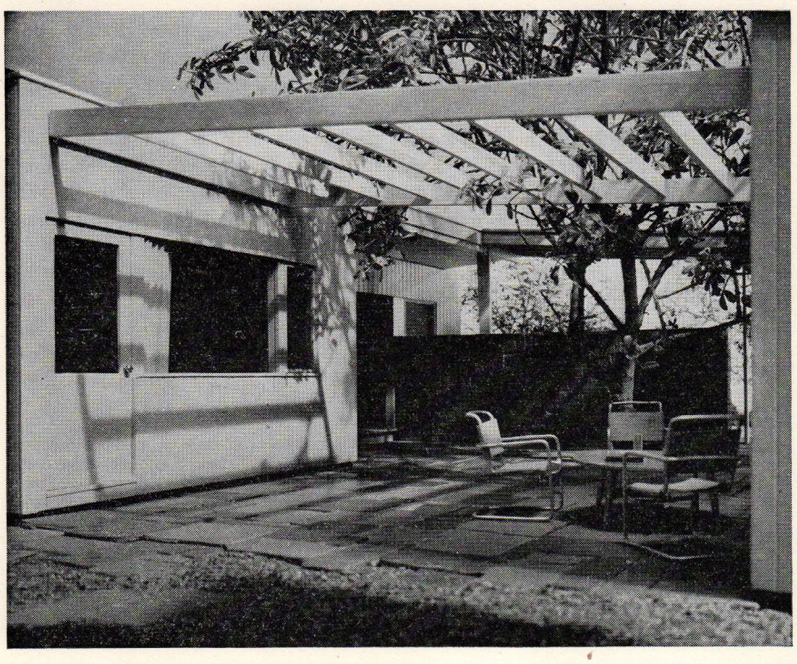
** Heat loss computations in the 12 houses range from 32,290 BTU to 101,105 BTU, with all estimates based on a temperature of —10°F and a 10 m.p.h. wind.

HUGH STUBBINS, JR.—with a small budget and simple materials, designs a good house for a growing family





SKILLFULLY INTEGRATING INDOOR AND OUTDOOR AREAS, THE L-SHAPED LIVING AREA FLOWS BOTH INTO LAWN (ABOVE) AND COURTYARD (BELOW)

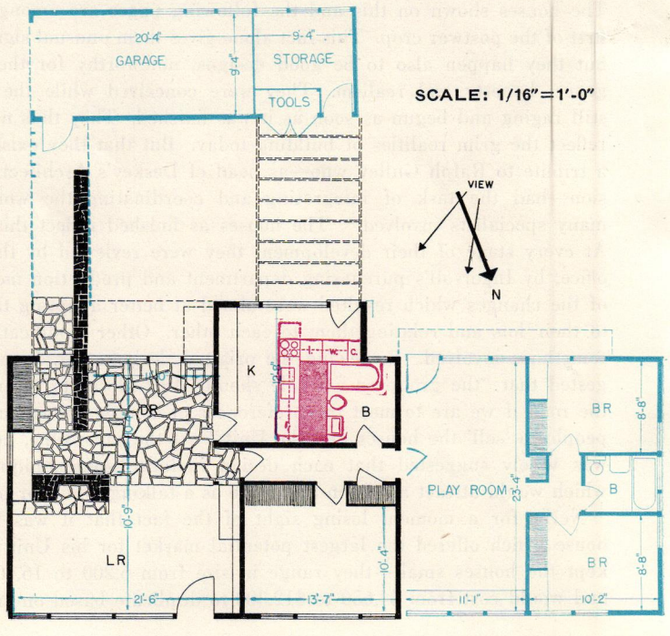


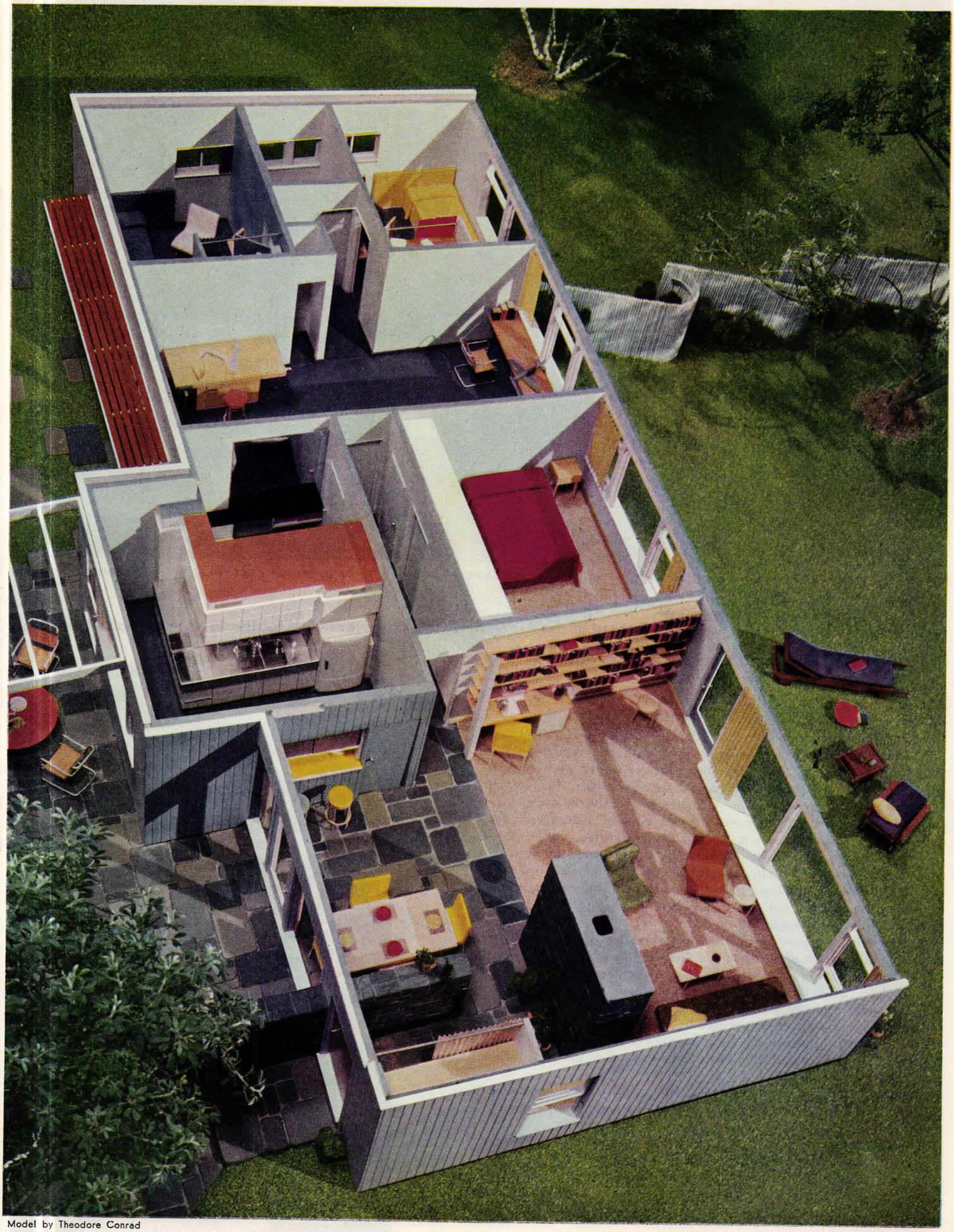
In its minimum form, this plan is skillful and compact and the smallest of the twelve designs; expanded, it provides excellent facilities for a family with young children. The two bedrooms, flanking the only conventionally-assembled bathroom in the project, are isolated from the main area by a large and sunny playroom. Since the only exit from this wing into the yard is overlooked by the kitchen, supervision of young children should be easy. The house has many skillful details. The courtyard wall penetrates the plan to create a small entry with closet, bench and recessed floor mat. Similarly, the flagstone paving of the dining area is carried out into courtyard and entry. Such devices yield an effect of spaciousness despite the relatively limited area.

With what is intrinsically one of the best designs in the group, the house suffers from perhaps the most difficult site. One of four on the cul-de-sac, its lot is on the northwest corner with the principal outlook to the northeast. To gain privacy from the street and to take advantage of the view, Mr. Stubbins has therefore tilted his main axis from northwest to southeast. This means that his living room gets view and privacy but no winter sunlight. And the garage which—with the wing wall along the street front—creates a charming courtyard, also excludes most winter sunlight from the dining area.

The house is frame throughout, the exterior surfaced in a vertical tongue-and-groove siding, painted white: roof and all exterior walls have 4 in. rockwool bat insulation. The Utility Unit uses oil for heating and gas for cooking and hot water. Overhead ductwork is carried laterally down the center of the house south of the break in ceiling line. The heating plant is designed for a maximum heat load of 52,938 BTU (41,760 BTU with storm sash and weather-stripping).

CUBAGE: 9,941 cu. ft. (minimal plan), 16,262 cu. ft. (expanded);
COST: (at 75¢ cu. ft.) $7,455.75 and $12,196.50.



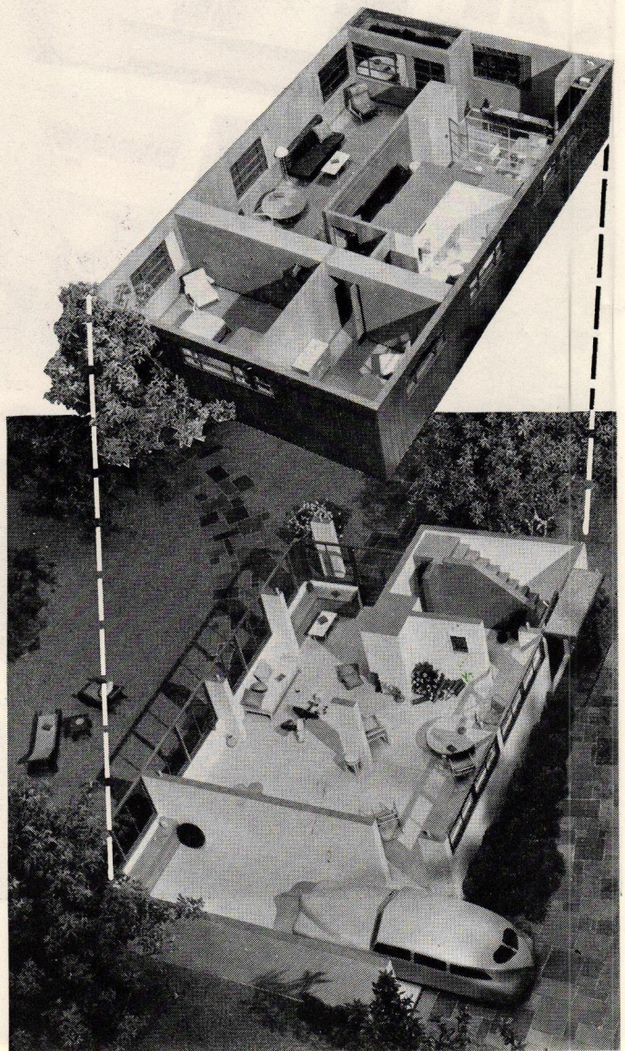


Model by Theodore Conrad



CHILDREN MAY PLAY ON RAINY DAYS, AND THEIR ELDERS ENTERTAIN AT NIGHT, IN THE LARGE PLAYROOM ON GROUND FLOOR

EDWARD D. STONE, just out of the Army, designs a post-war house for the South which also looks well in the Midwest. Stanley J. Reese, Associate Architect.



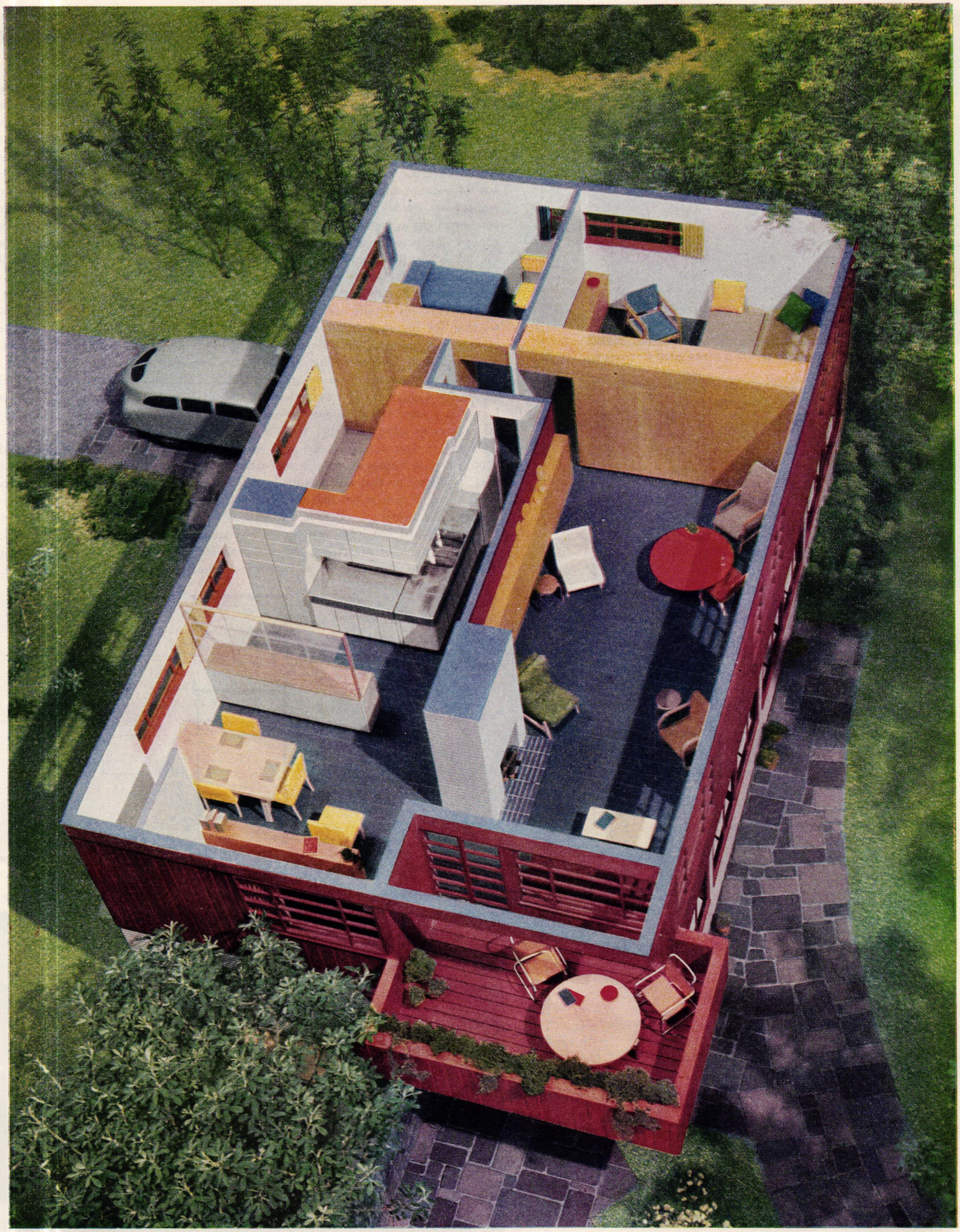
Termed by Mr. Stone "Southern Modern," this house has a ground floor which, in the south and west, would be highly desirable. Entirely open, it would provide a half-protected recreational area at garden level and guarantee improved outlook and ventilation for the second floor. But, as built in Michigan and necessarily enclosed, it offers a rather lavish use of space in relation to the living area proper on the second floor. (This second floor is obviously a complete house in itself and could satisfactorily be placed directly on the ground.) Even so, for the family who could afford it, this ground floor would be an attractive feature during midwestern summers. With its fortunate coincidence of outlook and southern exposure at the rear, the north and west walls can be all but solid, while the south and east have large areas of removable sash.

A dumbwaiter connects the two floors, opening into the kitchen where the Utility Unit again demonstrates its versatility in both installation and plan. The mechanical core was lifted into place through a slot in the kitchen floor. After this, the various elements were snapped into place. Although some architects might question his placement of the kitchen along the north-south axis, Mr. Stone reasoned this way: laundry units will seldom if ever be in use when meals are being served or cleared away. Hence their closed tops will increase counter space between kitchen and range at the time when it is most needed.

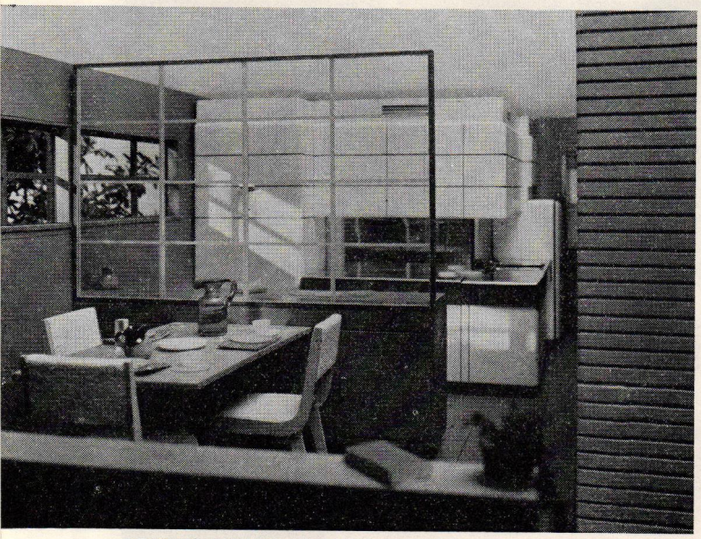
The heating unit, which is oil burning, is designed for a maximum heat loss of 83,720 BTU (or 60,140 BTU with storm sash and weather-stripping) and is individually vented.

First floor walls are of solid brick masonry painted on both exterior and interior surfaces. A continuous concrete slab serves as playroom, garage and entrance floor. The second floor walls and roof are conventionally framed in wood, outside walls being sheathed in vertical siding.

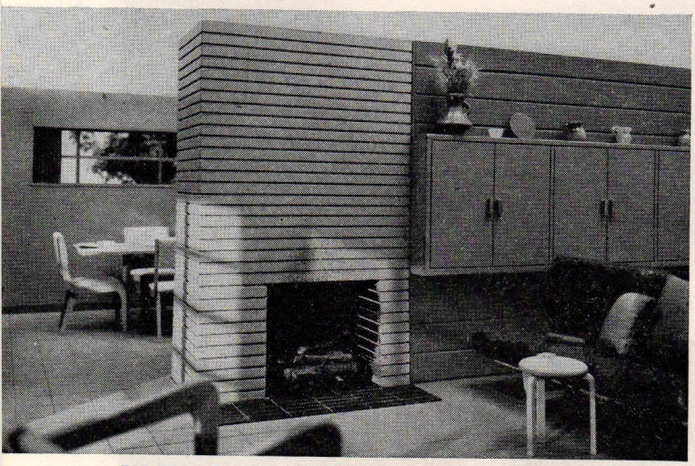
CUBAGE: 13,131 cu. ft. COST: (at 75¢ cu. ft.) $9,848.25.



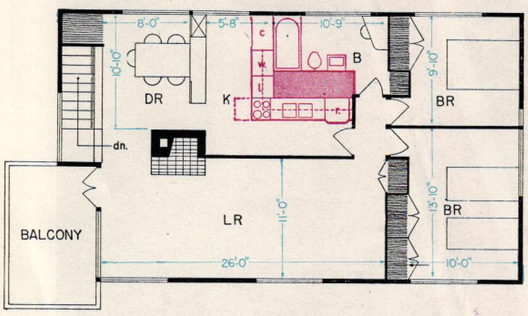
Model by Theodore Conrad



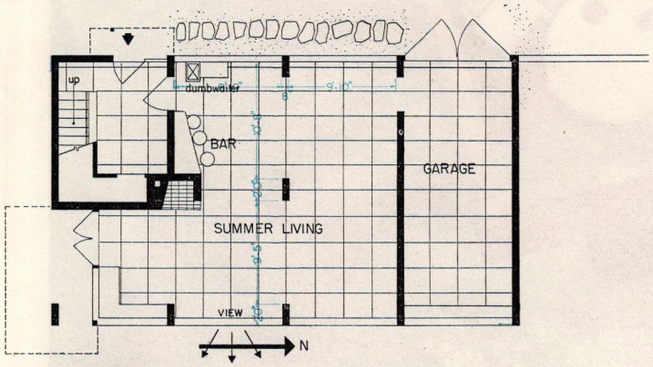
BEYOND LOW STAIR RAIL IS DINING AREA AND KITCHEN



FIREPLACE WALL BOASTS LINE OF HANGING CABINETS



SECOND FLOOR



FIRST FLOOR SCALE: 1/16″=1′-0″

L. MORGAN YOST used an unusual framing system

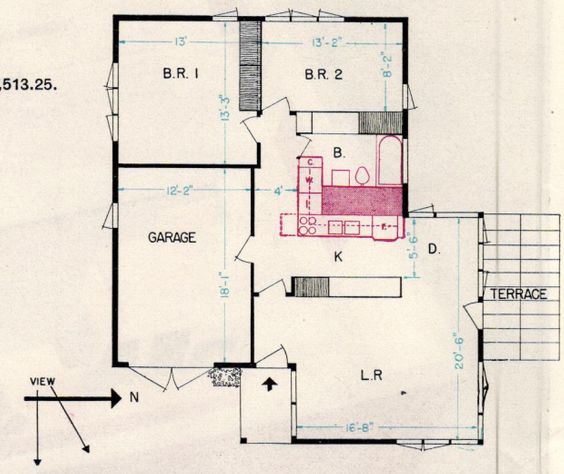
In orienting this house, Mr. Yost has not only *not* followed the prevailing practice of having the main rooms face south; he has also given some intriguing reasons for not doing so. The main view from his plot lies to the northeast. He has made this view a part of the design of the house. He adds: "Even aside from this distant view, a flower garden at the north of a house is extremely enjoyable, as flowers face south when in bloom and therefore present much more color. Trees and foliage are much more pleasant bathed in sunlight than they are in silhouette against an overbright sky." His design, nevertheless, provides for considerable southern light in the living area through both the high windows under the entrance canopy and through the clerestory over the central hall. As in the Dow house (p. 112), Yost has eliminated ceiling joists as tie beams: here the ridge is framed into a load-bearing partition down the center of the house.

Like all the houses in the project, this one includes a surprising amount of carefully worked-out details—far more than would be possible under the usual architectural fee for such small houses. Despite its simplicity, the detailing of the entrance portico and the wide overhanging eaves show real distinction. The exterior, which is beveled siding, is painted an iron-oxide red with white trim.

By the very nature of its design, the Utility Unit has eliminated the principal reason for a chimney. However pleasant a fireplace in the living room, there is no longer any need for a chimney where the heating plant is concerned. Probably for reasons of strict economy, Mr. Yost recognized this and omitted the chimney, replacing it with a light frame vent whose canny prefabricated, metal-sheathed hood plays an important role in the exterior appearance of the house. The unit itself is placed so that the laundry elements face on the interior hall; while this saves space, it does mean that the wash must be carried in and out through the garage. The furnace is oil fired and designed to handle a maximum heat loss of 76,440 BTU—51,720 BTU with storm sash and weather stripping. Incidentally, when the volume of Mr. Yost's house is considered (11,351 c. ft.), it would seem that his north-facing glass areas consume a relatively large amount of heat.

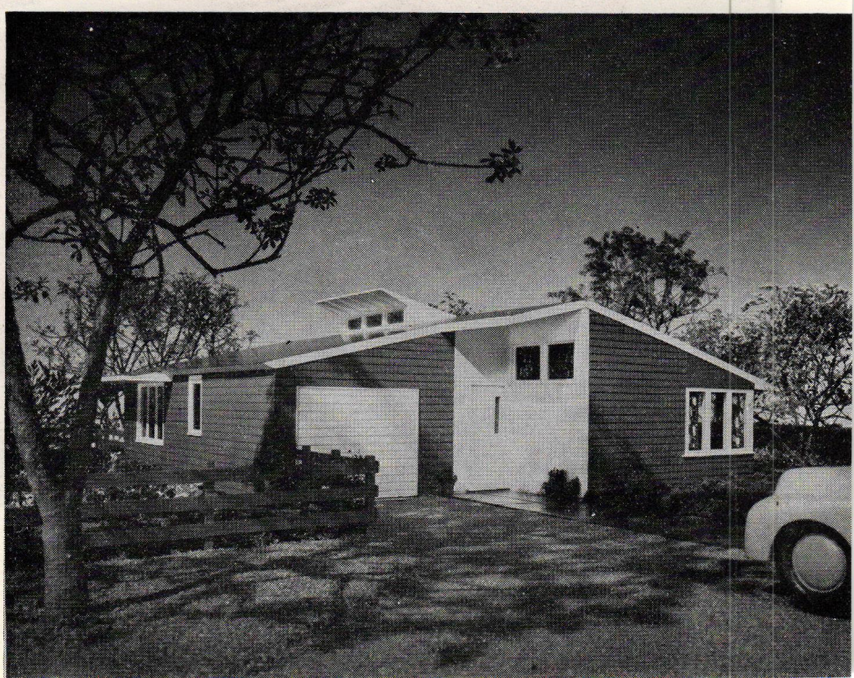
CUBAGE: 11,351 cu. ft.

COST: (at 75¢ cu. ft.) $8,513.25.

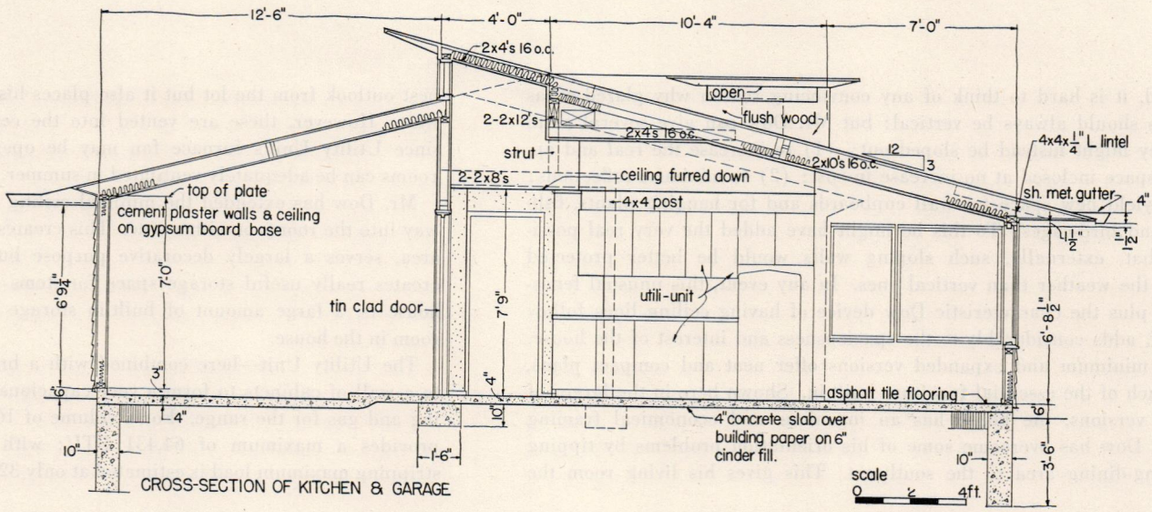


SCALE: 1/16″=1′-0″

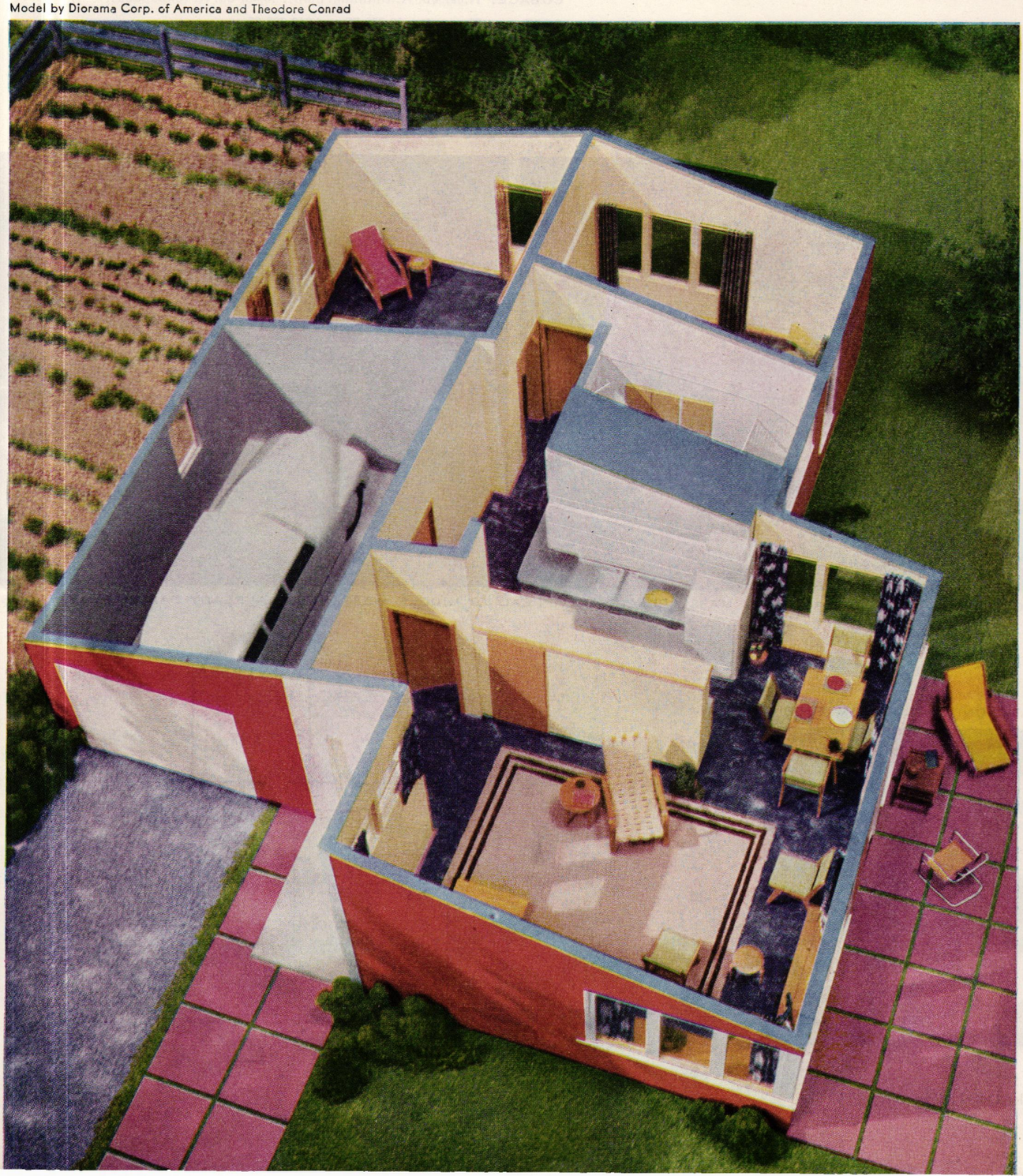
CLERESTORY AND ENTRY WINDOWS ADMIT SOUTH LIGHT TO CENTER OF HOU



and a central corridor to get maximum efficiency and interest in this small house.



Model by Diorama Corp. of America and Theodore Conrad



ALDEN B. DOW employs sloping window walls and ceilings to lend space and interest to a compact house.

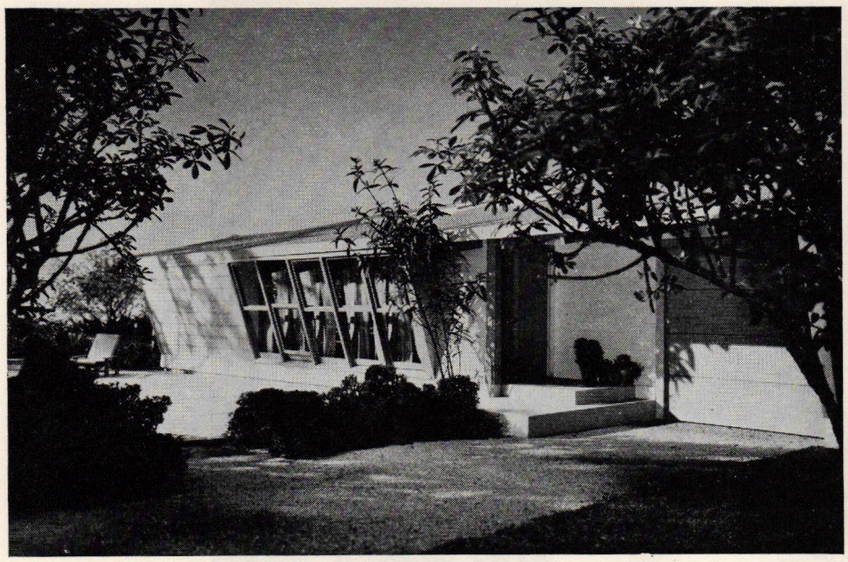
Off-hand, it is hard to think of any convincing reason why glazed areas in walls should always be vertical: but Mr. Dow can give several as to why they might instead be sloped out: (1) to increase the real and apparent space inclosed at no increase in cost; (2) to minimize reflections; (3) to yield new space for wall cupboards and for hanging plants, fishbowls and bird-cages. To this he might have added the very real possibility that, externally, such sloping walls would be better protected against the weather than vertical ones. In any event, this unusual fenestration, plus the characteristic Dow device of having ceiling lines follow the roof, adds considerably to the spaciousness and interest of the house.

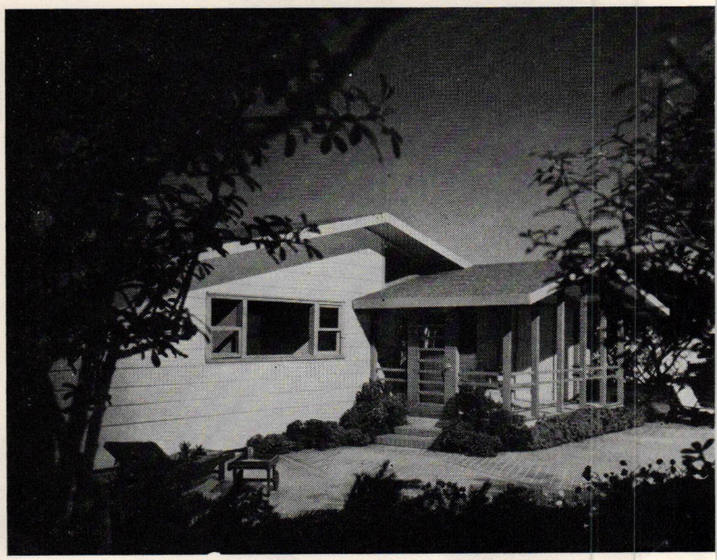
Both minimum and expanded versions offer neat and compact plans, with much of the essential furniture built-in. Shown here in the larger of its two versions, the house has an ingenious and economical framing system. Dow has overcome some of his orientation problems by tipping the living-dining area to the southeast. This gives his living room the best outlook from the lot but it also places his bedrooms along the southwest. However, these are vented into the central overhead duct and—since Utility Unit's furnace fan may be operated independently—these rooms can be adequately ventilated in summer.

Mr. Dow has extended the minimal ceiling of his central corridor part way into the rooms on either side. This creates a shelf which, in the living area, serves a largely decorative purpose but which, in the bedrooms, creates really useful storage space for items like luggage. Small as the house is, a large amount of built-in storage space is provided in every room in the house.

The Utility Unit—here combined with a breakfast bar at right angles to a wall of cabinets to form a very capacious kitchen—uses oil for heating and gas for the range. For a volume of 16,407 c. ft. this heating unit provides a maximum of 64,431 BTU: with storm sash and weatherstripping maximum load is estimated at only 32,290 BTU.

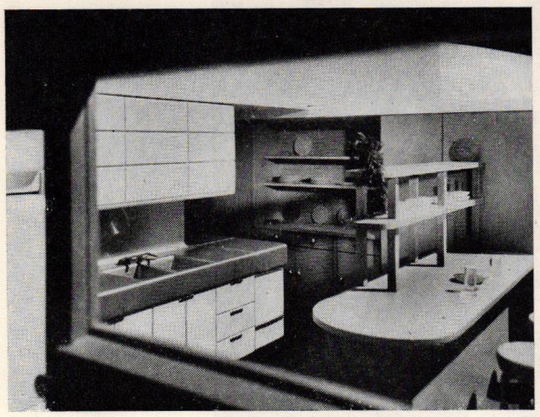
CUBAGE: 11,697 cu. ft. (minimal plan), 16,407 cu. ft. (expanded).
COST: (at 75¢ cu. ft.) $8,772.75 and $12,305.25.

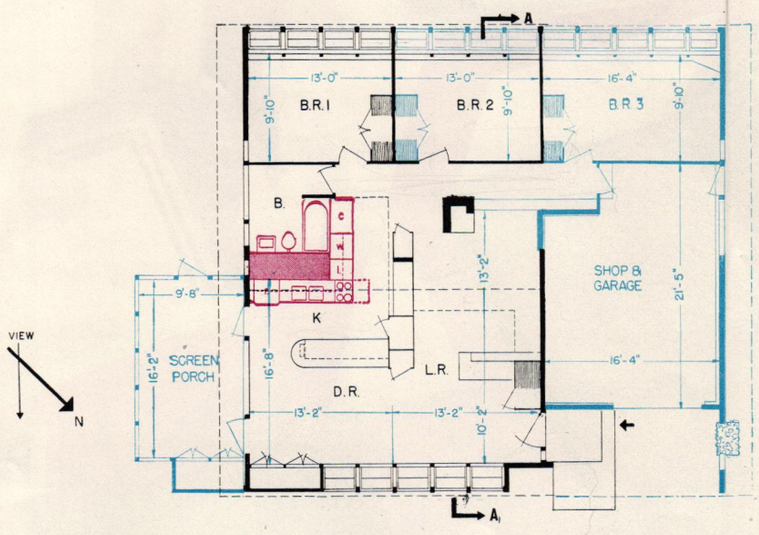


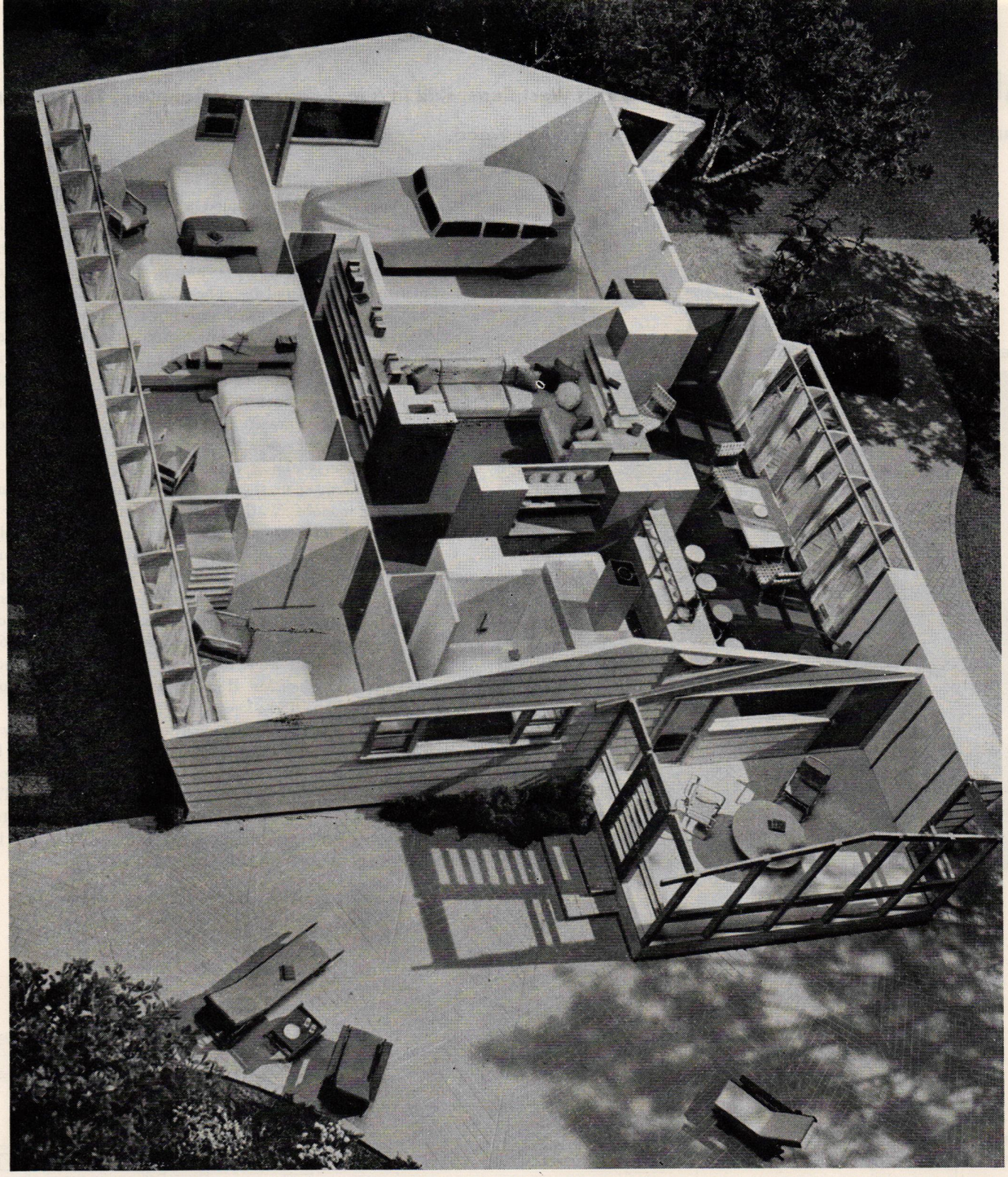


ITS WIDE EAVES, GENTLE ROOF SLOPES AND LOW MASS ARE APT TO APPEAL TO MIDDLE WESTERNERS ALREADY FAMILIAR WITH THIS IDIOM

BREAKFAST BAR AND UNIT SEEN FROM PORCH

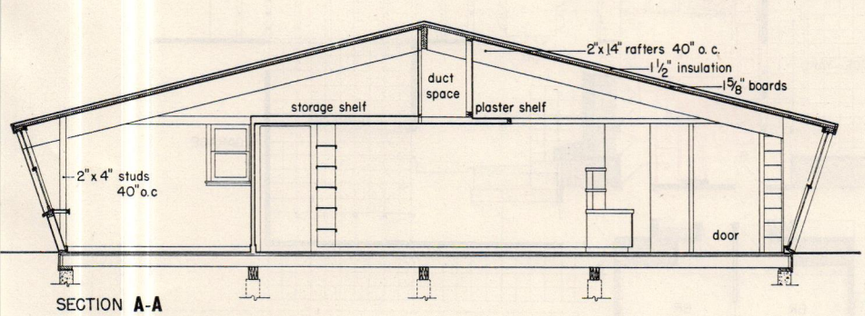




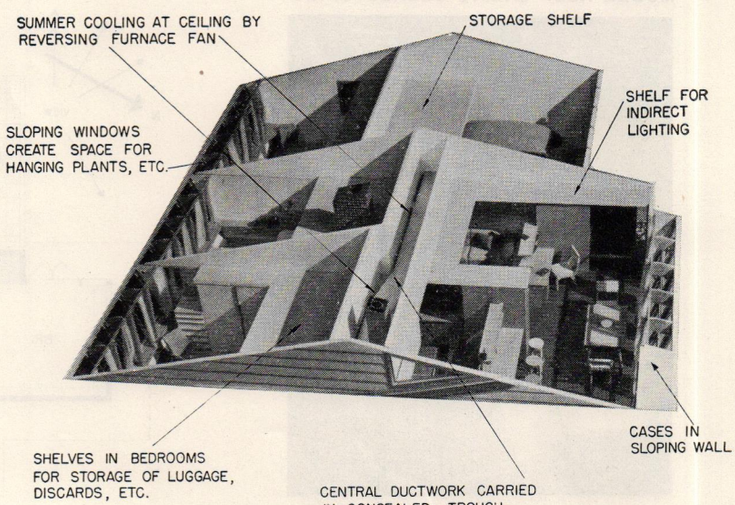


Model by Theodore Conrad & Devon Dennett

ROOFLESS MODEL SHOWS CONVENIENT CASES AND BAR SEPARATING KITCHEN FROM LIVING AND DINING AREAS



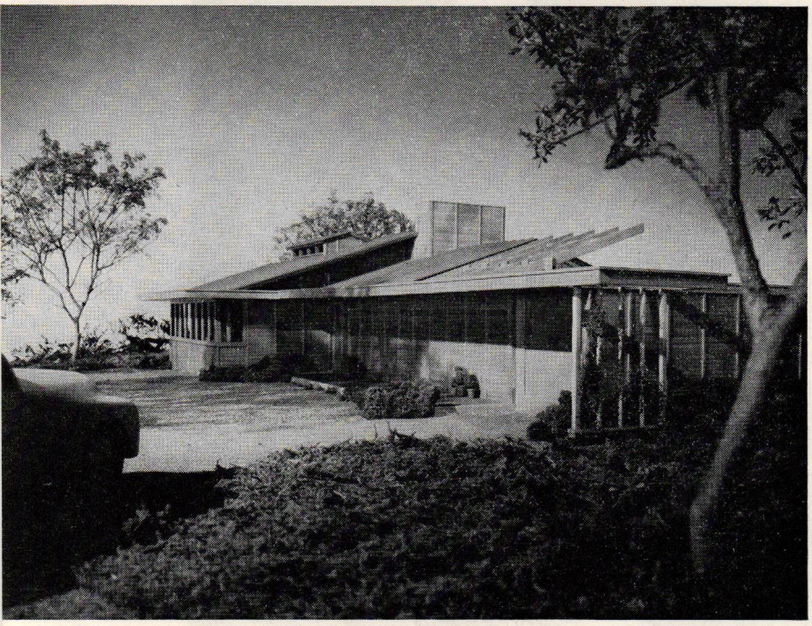
SECTION **A-A**



DESPITE the sloping windows and absence of ceiling joists, Dow's framing is simple and sound. Wall studs remain vertical: spaced 40 in. on centers, they receive exposed 2 in. by 14 in. roof rafters. Double-hung windows are thus free of wall.

HARWELL H. HARRIS shows his West Coast skill in a Midwestern environment. The largest in the group, his handsome house is sheathed throughout in natural wood.

WIDE EAVE CONNECTS DRIVE AND GARAGE WITH FRONT DOOR

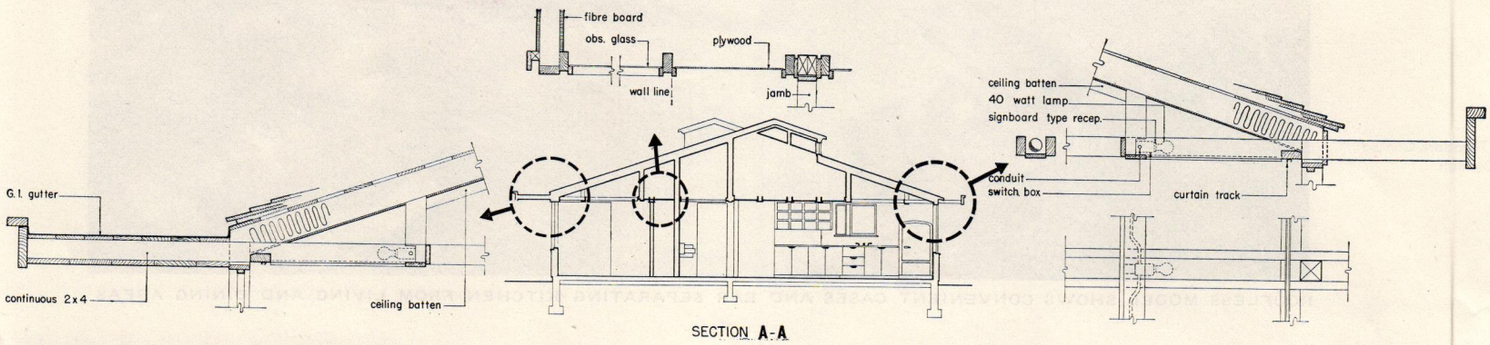


This is the largest and most expensive house in the Ingersoll demonstration project. It is included as evidence that, by addition of optional features, the Utility Unit is thoroughly suited to large houses. Mr. Harris' design succeeds in doing this—and much more. For the house is beautifully integrated with the contours, views and exposures of its site; its plan is flexible; and its appearance, both inside and out, is imaginative and handsome. Described as being a "ranch house type" (a term which Californians apparently apply to any rambling, one-story house with wide eaves) the design is actually in the best tradition of American residential work. It incorporates many of the details for which the Harris office is known—shallow roofs, clerestory windows, brilliant trelliage, semi-enclosed garden areas. But these are unobtrusively organized into the whole, so that they seem as much at home in Kalamazoo as in Los Angeles.

The house is almost completely built of unpainted redwood. It does not—as might at first appear—use a panel wall system, although it does employ a module. Walls throughout are conventionally framed with studs spaced 32″ on centers. Both faces are then sheathed in a tongue and groove redwood siding 4 in. wide. This siding is all pre-cut to multiples of 32″, so that joints always coincide with studs, and the joints are then sealed with a vertical batten. 4 in. of rock wool blanket insulation is used in roof and all exterior walls. The doors, windows and exposed rafters follow the same module, while roof rafters are 16 in. o. c. This system yields a wall whose scale and texture is an important part of the design. Only when Mr. Harris uses it to sheathe his solid brick chimney does it seem an affectation.

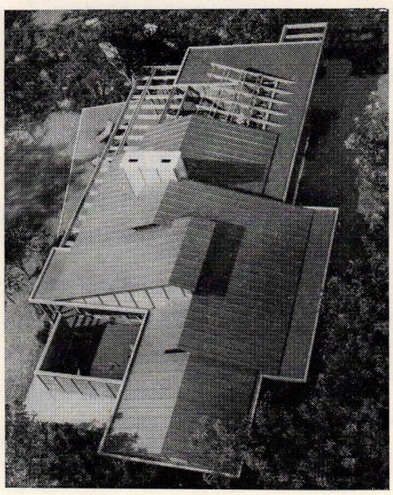
In plan, this house has much to commend it. Every room gets a view and the main ones face southeast. They are all fed by a compact but very efficient corridor whose glass-panel ceiling is source of both artificial and natural light—the latter from the clerestory. The Utility Unit—whose kitchen section has been extended by the addition of dishwasher and extra cabinets—uses gas for both cooking and heating. It is designed for a maximum heat load of 76,776 BTU.

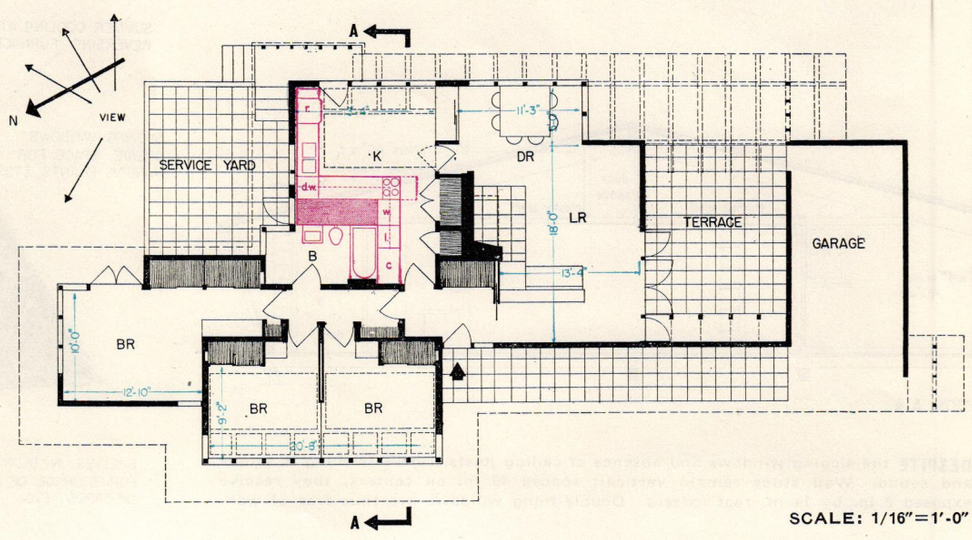
CUBAGE: 15,668 cu. ft. COST: (at 75¢ cu. ft.) $11,751.00.



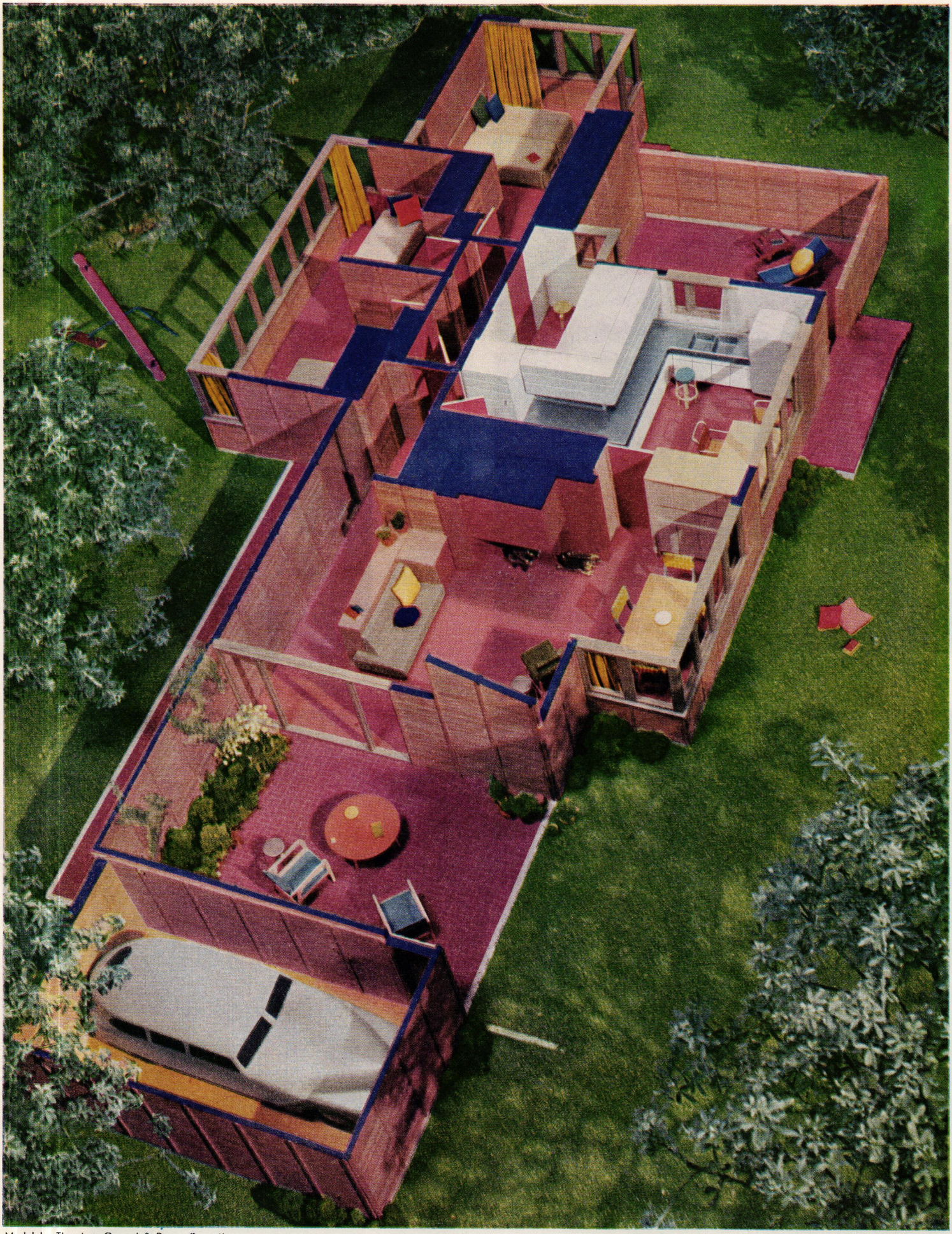
SECTION A-A

MODEL ROOF SHOWS CLERESTORIES



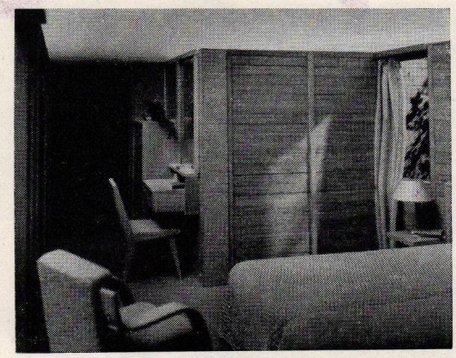


SCALE: 1/16″=1′-0″

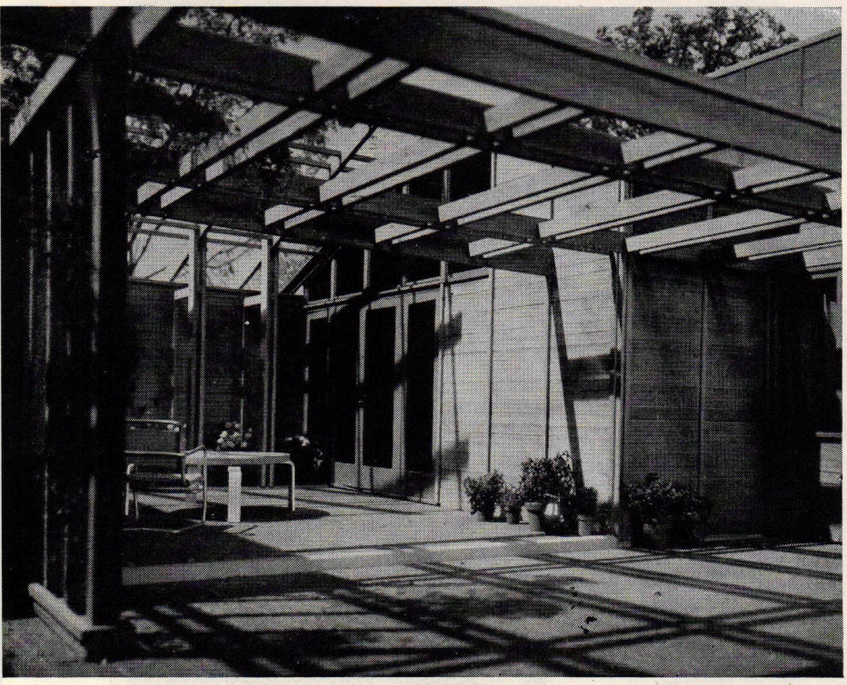


Model by Theodore Conrad & Devon Dennett

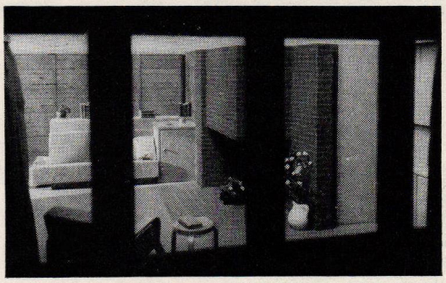
HARRIS HOUSE (cont'd)



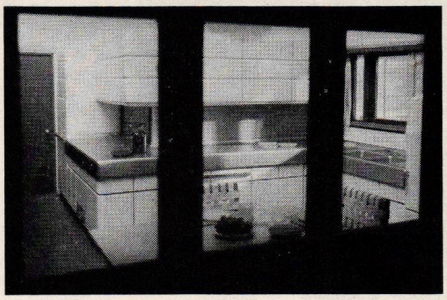
BUILT-IN DRESSING TABLE IN BEDROOM



LIVING ROOM GETS PLENTY OF WINTER SUN THROUGH TRANSOM

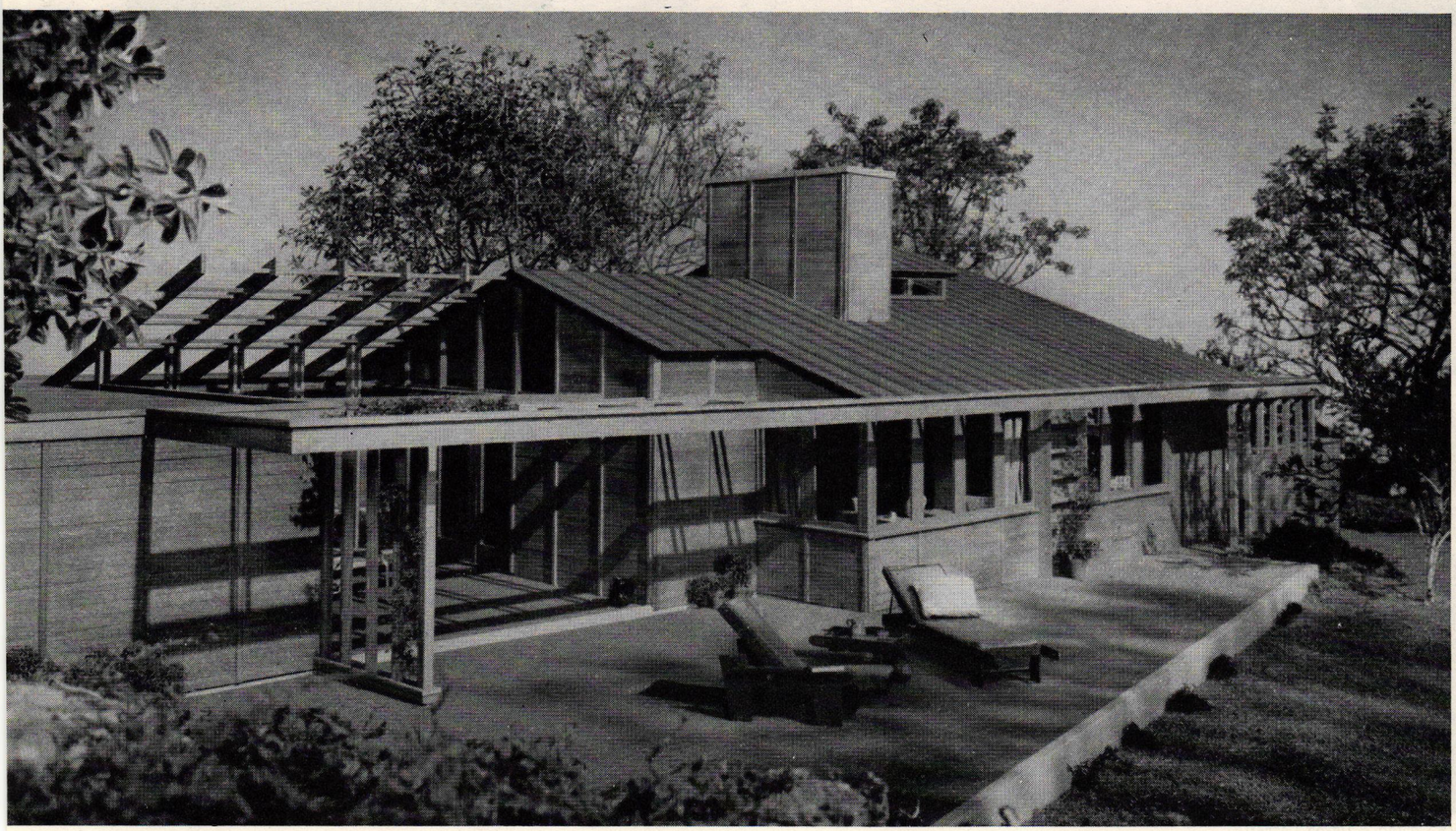


LIVING ROOM FIREPLACE FROM TERRACE



SINK UNDER WINDOW IN EXTENDED UNIT

WEST WALL AND TILTED PERGOLA, WITH COVER OF VINES OR CANVAS, PROTECT ENCLOSED COURT FROM SUMMER SUN



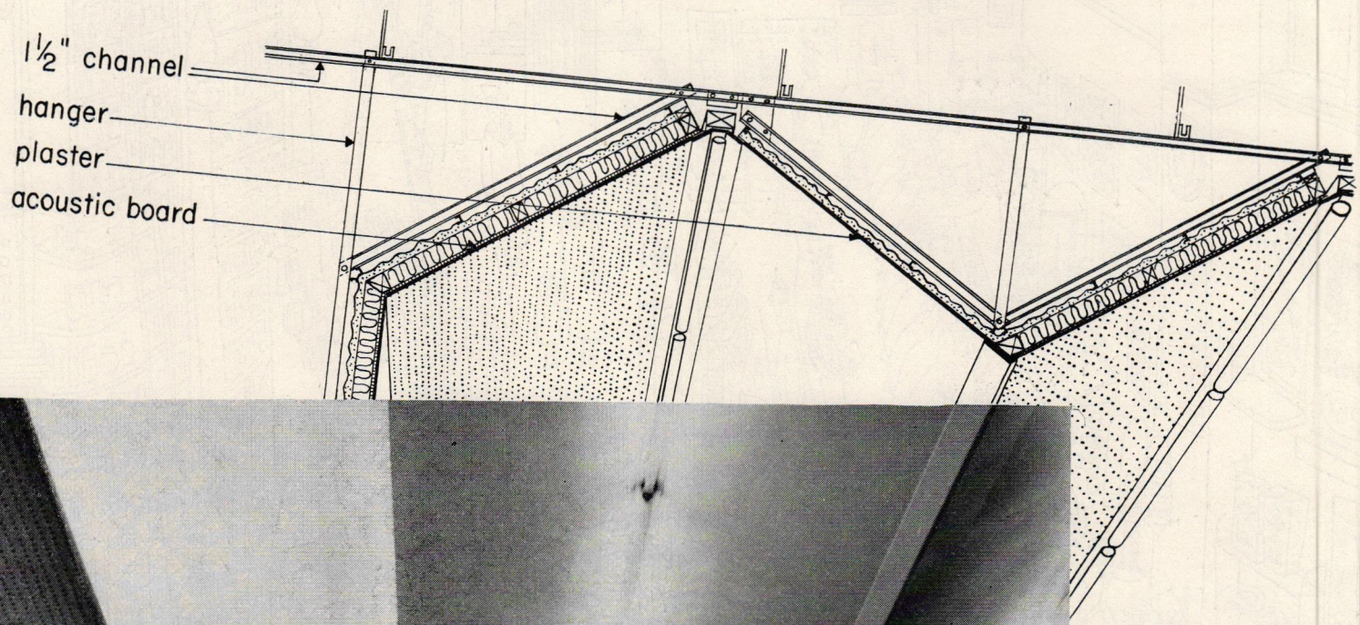


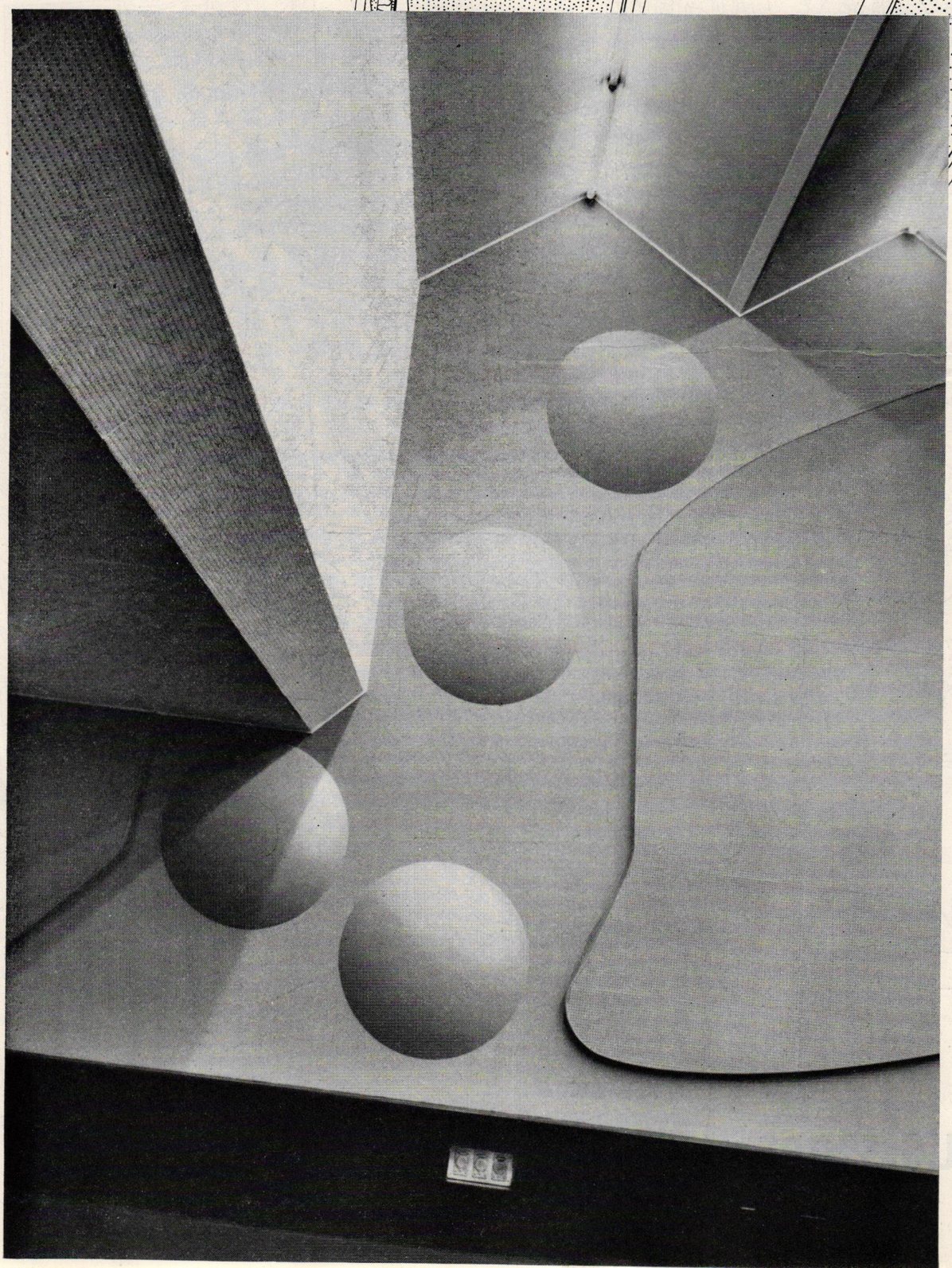
DRUG STORE

STEINBERG

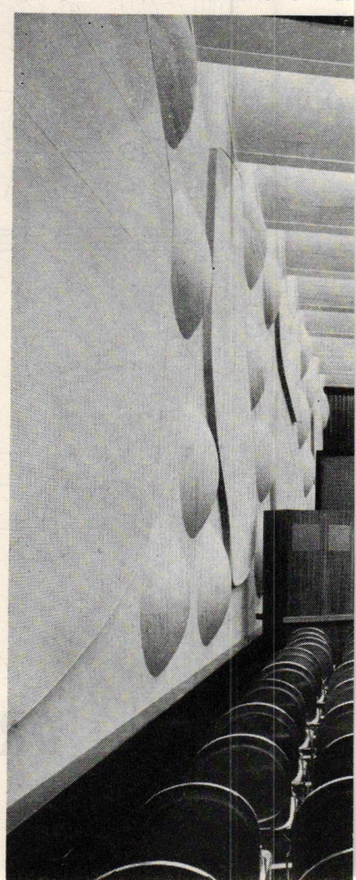
BROADCASTING STUDIO

A novel accoustical treatment developed for NBC. Carson & Lundin, Architects.

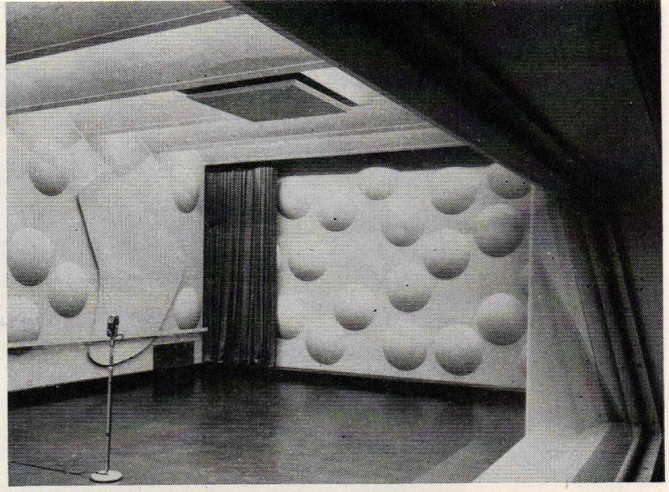




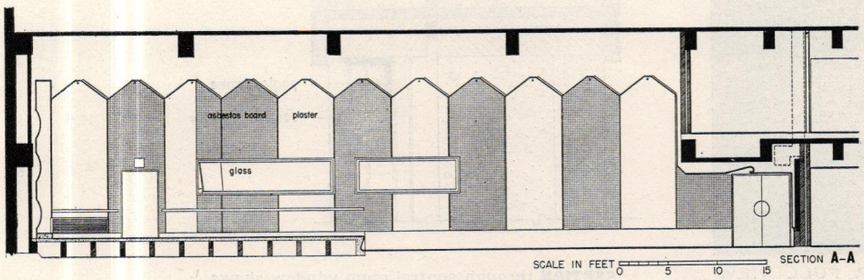
SAWTOOTH CEILING MASKS LIGH



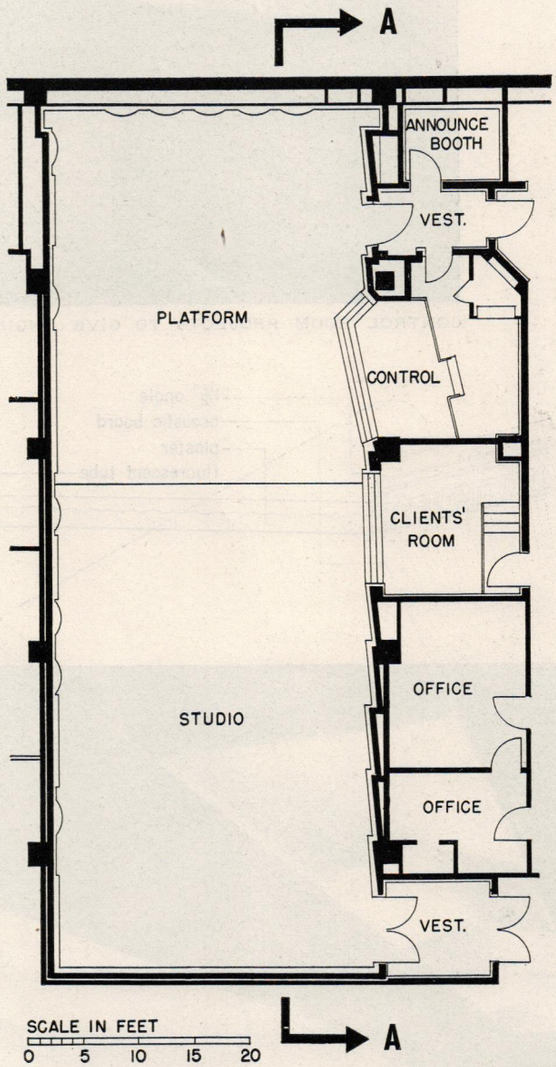
In addition to full-size theaters for big name broadcasts, most of the major networks maintain a number of smaller studios for secondary programs, some for the exclusive use of performers and technicians, others designed to accommodate small audiences. This recently completed auditorium is one of the latter group. Located in Rockefeller Center's largest building, its simple, rectangular shape is two stories high in the main portion, the control room, client's booth, and entrance having standard office building ceiling heights. A novel interior treatment represents the first attempt at accoustical control of this type. In the earlier days of broadcasting an abundance of absorbent materials were considered technically correct but it was later discovered that they produced "dead studios"—rooms with not enough sound reflection. Since then, staff engineers have worked out on a percentage basis a new formula calling for more dispersion and less absorption. Here, accoustical material is used only for the free forms applied to the wall. The convex discs, irregularly placed, are known as "diffusospheres," and are calculated to combat "discrete reflections" (the echoes, kickbacks and sound flutters that bounce off flush services and affect the sensitive microphones). While semi-cylindrical and curved walls have been widely used, this is the first time that the



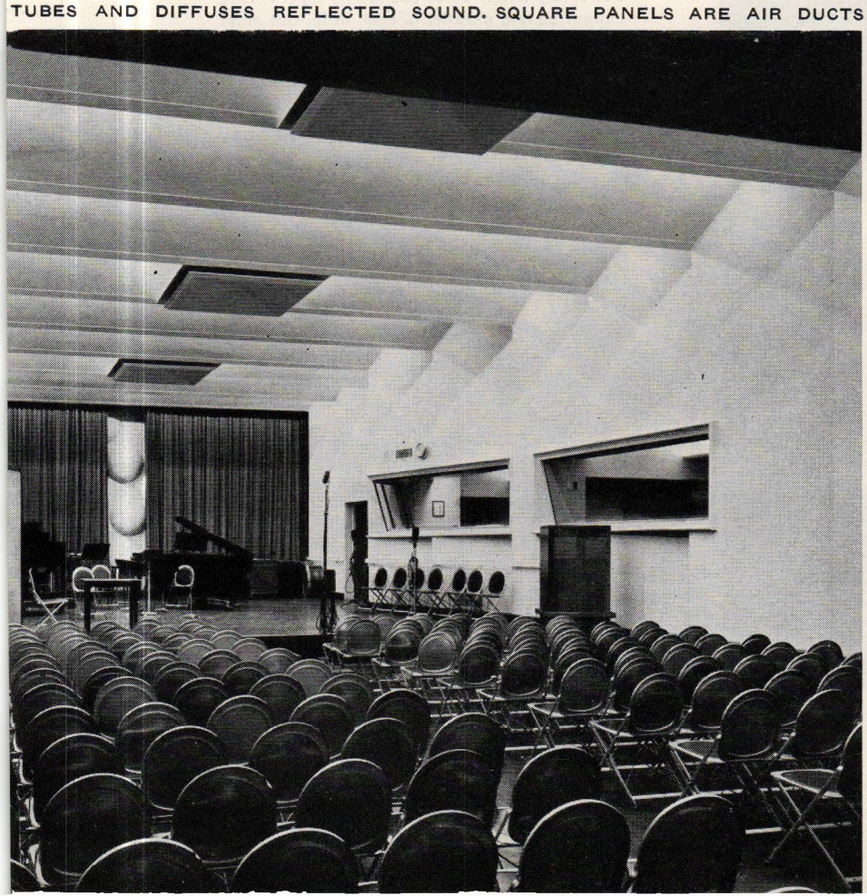
CURTAIN ADJUSTS ACCOUSTICS FOR PROPER MIKE BALANCE

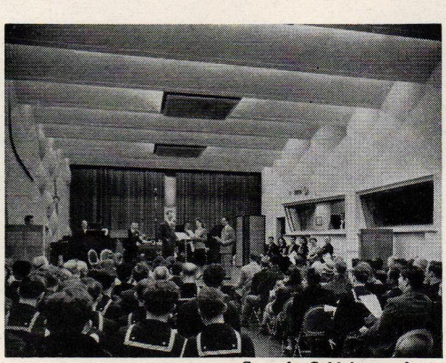


relief has not been carried from floor to ceiling. The spherical treatment, however, has the obvious advantage of providing maximum floor area since less space is required for side aisles. The straight baseboard is also easier to clean. Since its opening in the late fall, artists, and particularly engineers, have been enthusiastic over the performance of the studio, claim that they can notice considerable improvement over other types of sound treatment. Public opinion, too, has been entirely favorable.

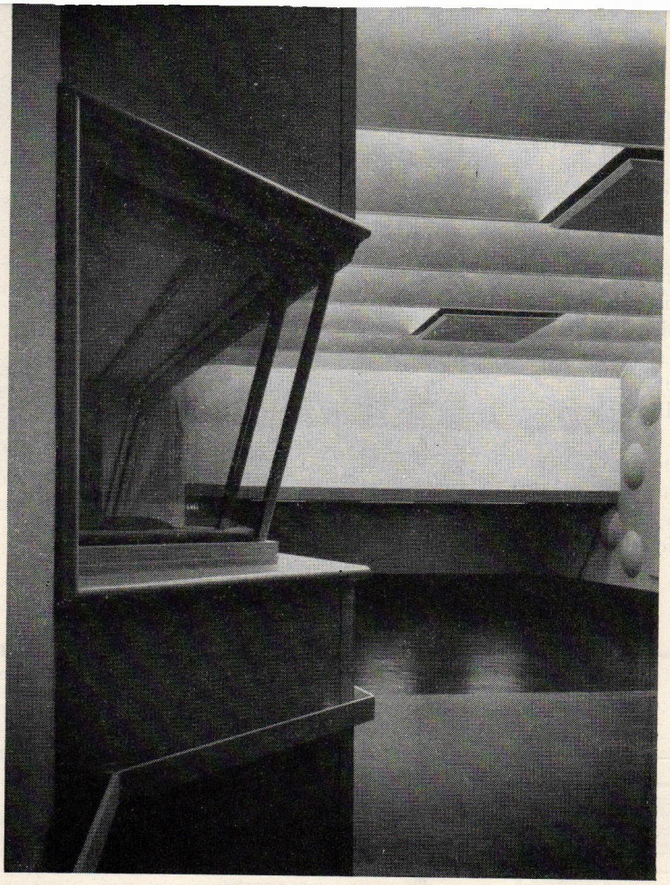


TUBES AND DIFFUSES REFLECTED SOUND. SQUARE PANELS ARE AIR DUCTS

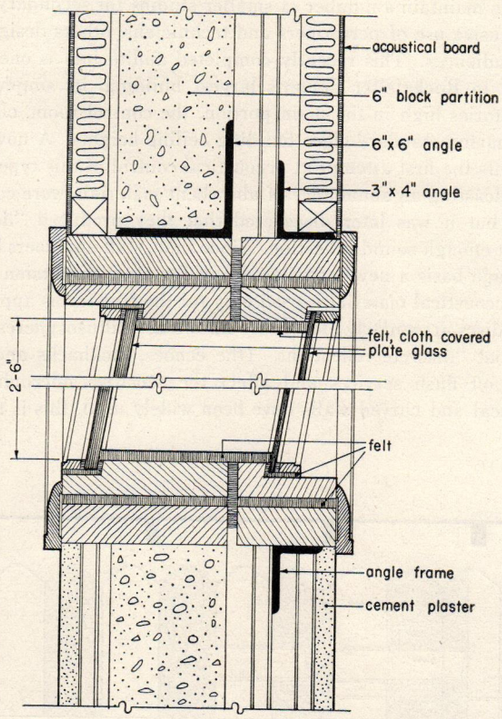




Gottscho-Schleisner photos



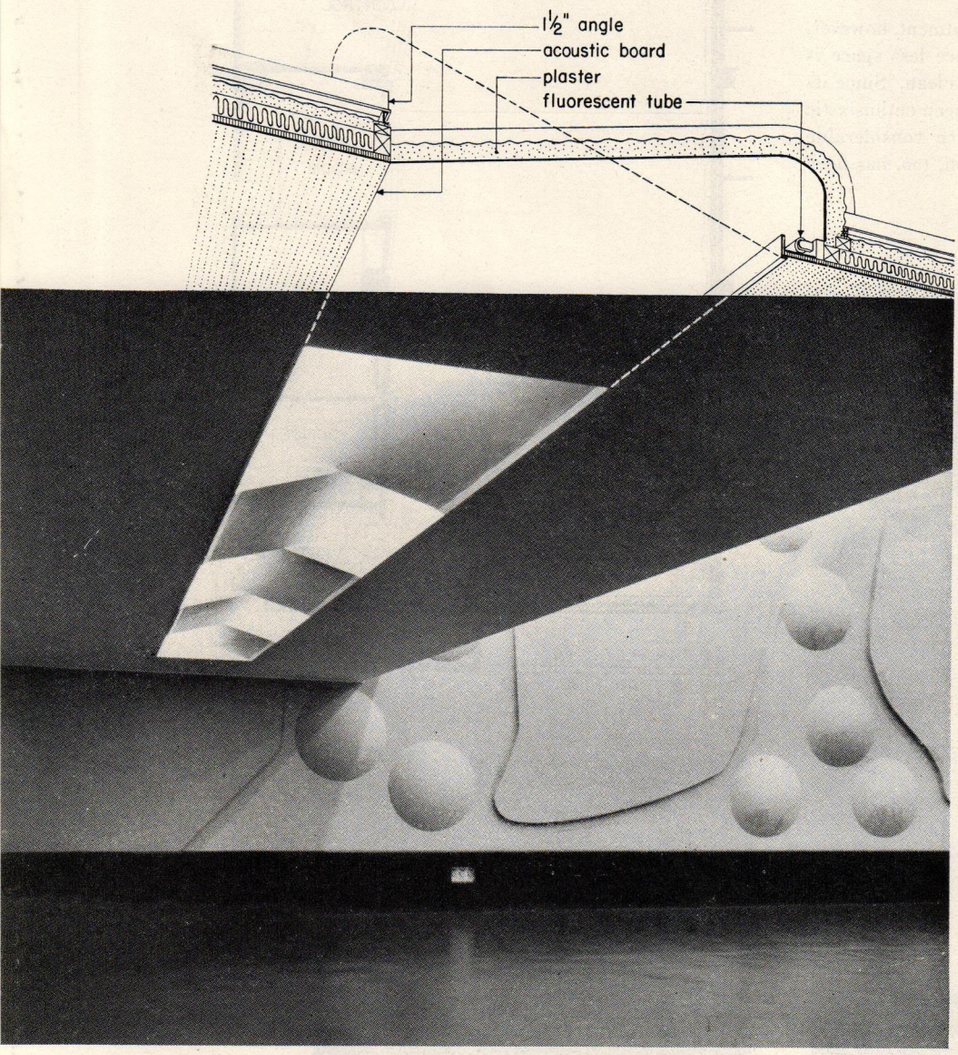
CONTROL ROOM PROJECTS TO GIVE ENGINEER FULL VIEW



SECTION through control room window shows the use of heavy and lightweight frames and glass in 2 panels, isolated from each other by felt strips so that they float independently. This formula has become fairly standard in studios throughout the country to minimize transfer of sound vibrations from one pane to another. Glass is installed at an angle to avoid reflection.

Standard appointments were used in all places except the disc covered walls. The baffled wall on the side of the control room makes alternate use of plaster and accoustical board as does the sawtooth ceiling in order to achieve the prescribed absorbent and reflecting areas. Wiring in this type of studio is extremely tricky since sound and light wiring cannot be laid parallel to each other but must be placed at right angles. The diffusospheres are of hollow concrete applied to a flush wall surface.

N.B.C. ENGINEERING DEPT., ACOUSTICAL ENGINEERS.



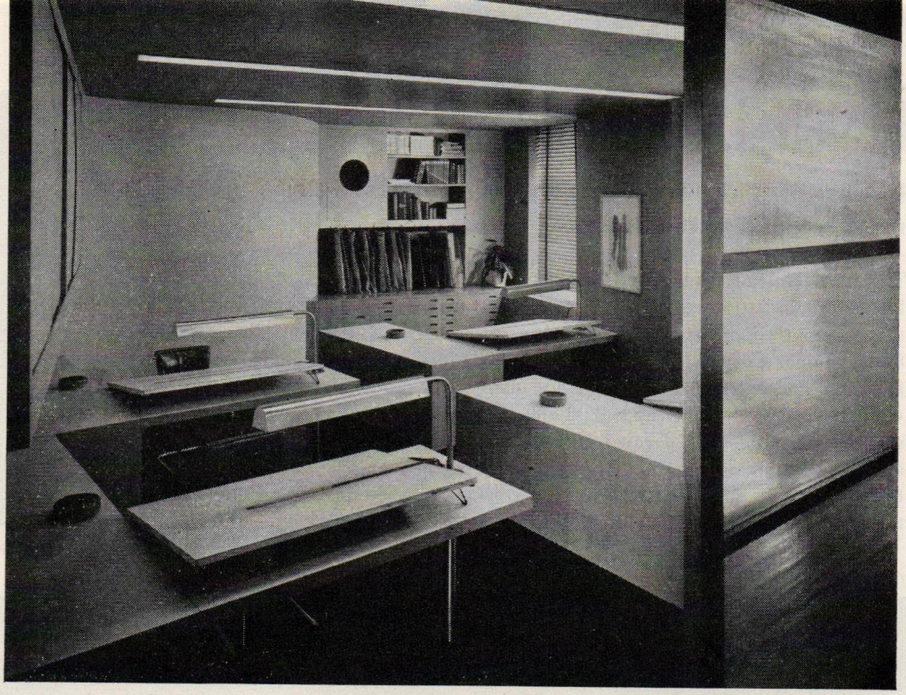
ENTRANCE LIGHT COVE HAS CROSS CURVED SURFACES LIT ON ALTERNATE SIDES

DESIGN OFFICE

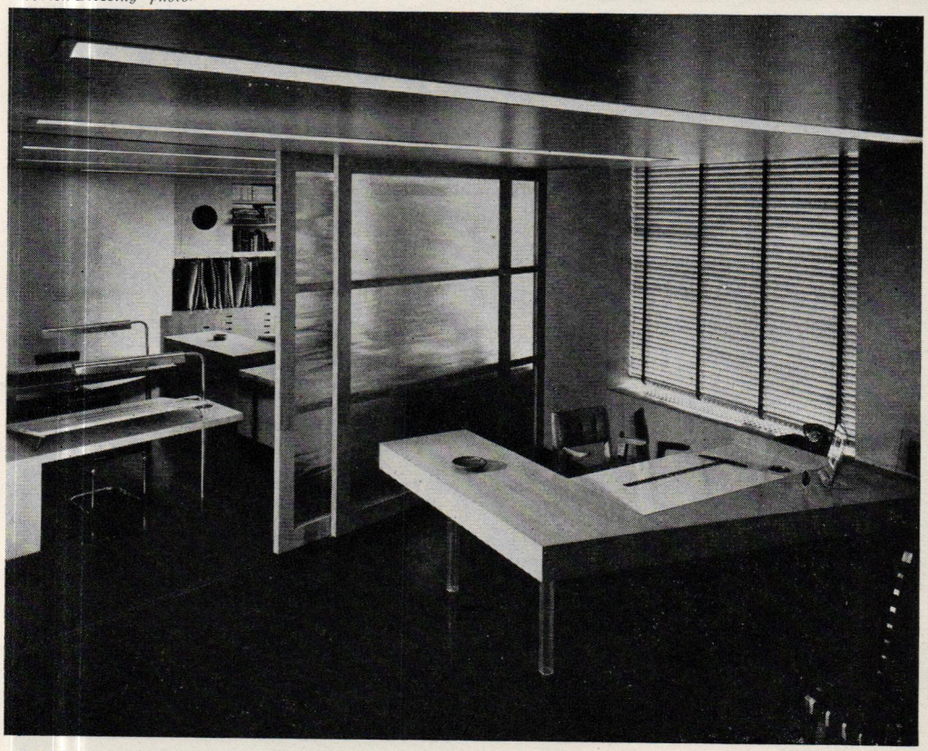
ROBERT SIDNEY DICKENS, Designer

The use of a curved wall and diagonal elements in the plan of this small office has greatly enhanced the utilization of space. Since a conference room was out of the question, the designer chose to provide clients with an informal area furnished more in the character of a living room than a business office. His own desk, the sole piece of office furniture, faces a long, built-in couch with one or two occasional chairs placed casually about. Plants and paintings are used as part of the decorative scheme. Sliding panels of opaque glass set at a slight angle separate this room from the drafting room behind it, which can accommodate four employees. Their desk and taborets, specially designed and built-in, contribute interest to what might be a dull little working cubicle.

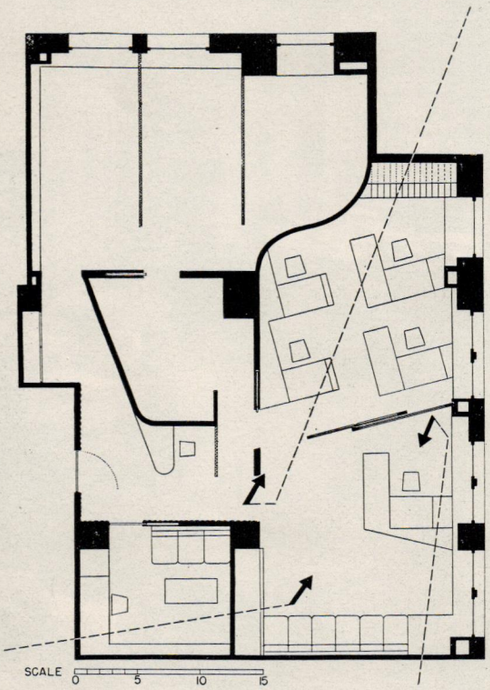
Hedrich-Blessing photos



DRAFTING ROOM CONTAINS FOUR BUILT-IN DESKS

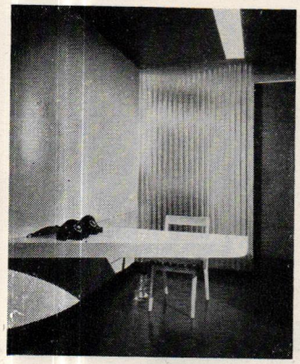


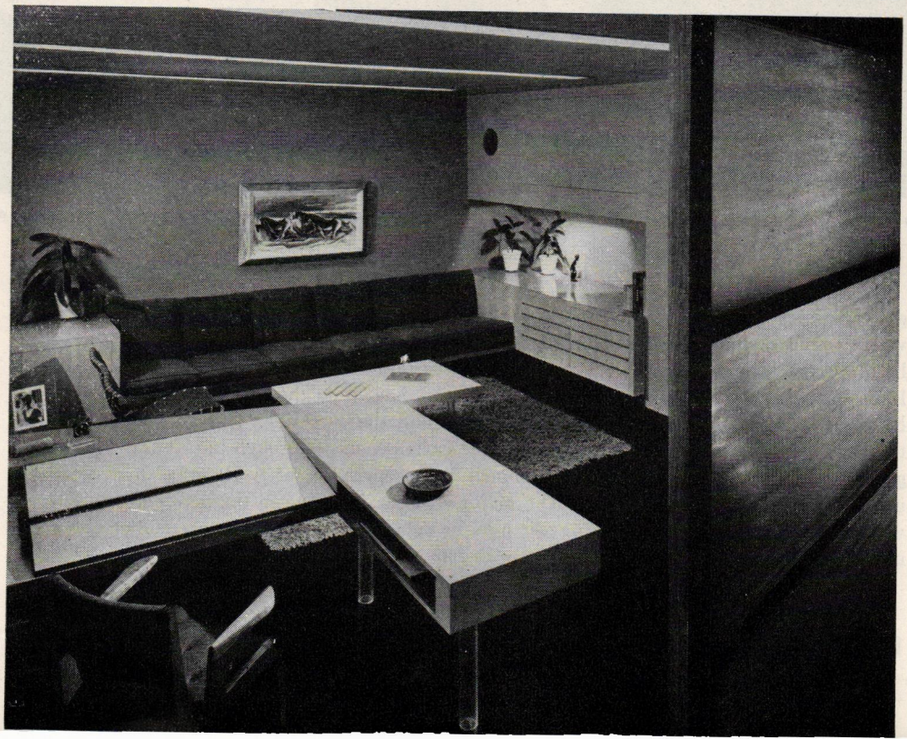
GLASS PANELS SECLUDE CHIEF DESIGNER'S OFFICE



CONFERENCE AREA IS FURNISHED AS A LOUNGE

RECEPTION

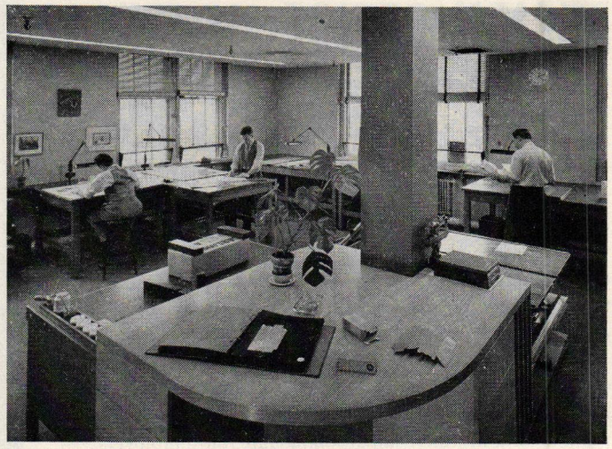




DESIGN LABORATORY

Bartolucci-Waldheim coordinates drafting, testing and display facilities in remodeling these package design workrooms.

The packaging of commercial products, once an afterthought of manufacturers, has grown in little over a decade to the stature of a sales science. Indicative of this constantly increasing emphasis on package design is the new laboratory built for Container Corporation of America in its Chicago carton plant. Here, on one floor, are concentrated the many steps involved in producing a modern wrapping with the necessary sales appeal. Before expansion, only half the present space was used and this was devoted entirely to a design studio. In remodeling, work areas for carton construction, art work, lettering and photography were separated from each other and a testing room added where finished designs are prejudged as to visibility and associational value. Also part of the new scheme is an exhibition



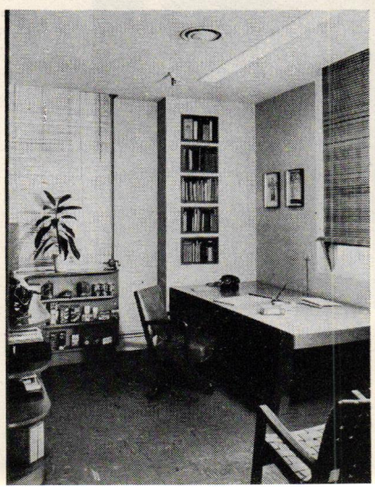
CARTON CONSTRUCTION REQUIRES LARGE WORK SURFACES

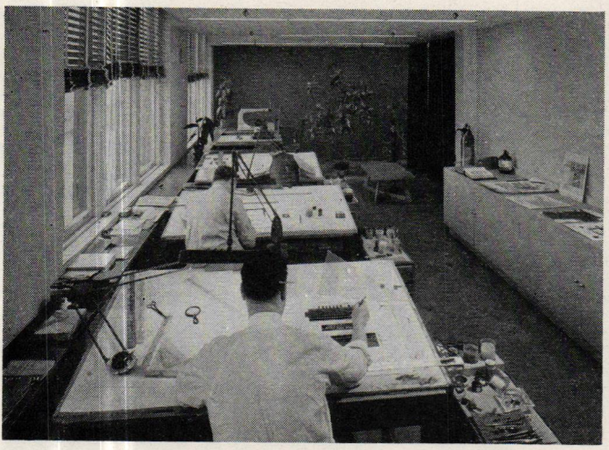
Torkel Korling, photos



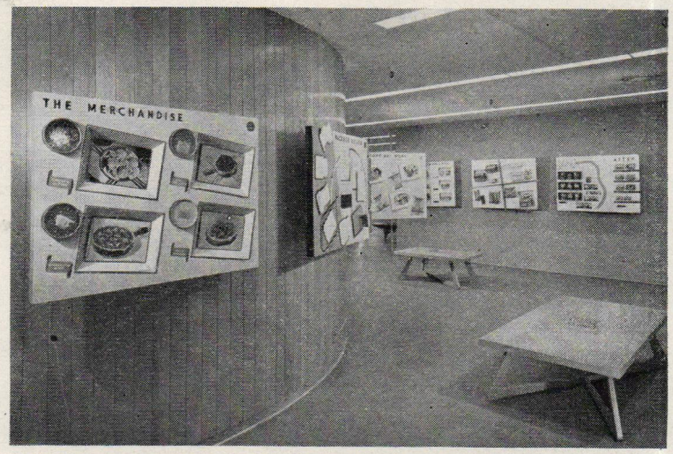
HANDSOME FURNITURE USED THROUGHOUT THE LABORATORY DOES MUCH TO HUMANIZE WORKADAY ATMOSPHERE OF DRAFTING ROOM

gallery which separates the testing room from work areas. The drafting room, where rough sketches are first worked out, is situated along the south side of the building and connects directly with an inner space for related work which in turn leads to the gallery. The carton construction room is also on the south, adjoined by a studio for finished art and photography along the east side. Access from this studio to the original sketch room and the carton room is through the central gallery. Thus, good circulation is combined with separation of work areas by using the public gallery as a hall. The major structural change in the new plan was a shifting of partitions; its biggest plus in appearance came from extensive use of wood textures and cork contrasted with smooth wall surfaces.

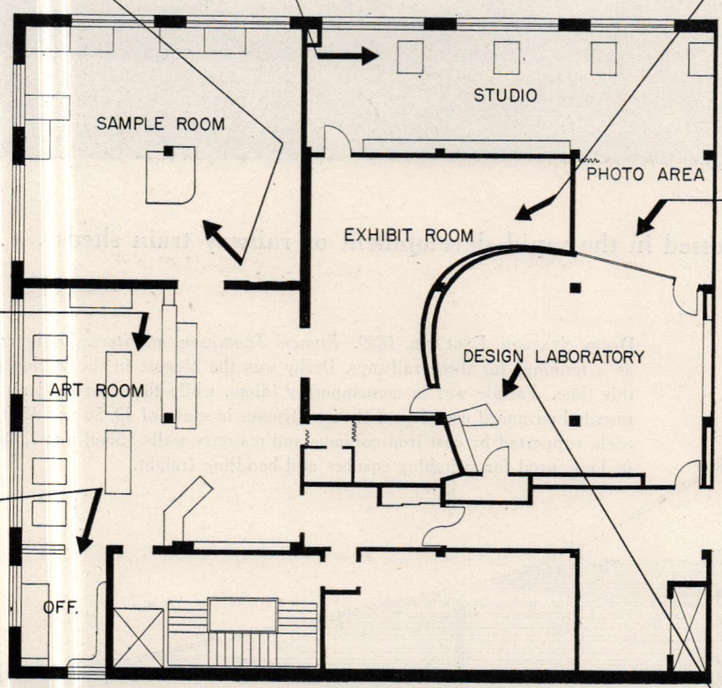




CURTAIN SEPARATES STUDIO FROM PHOTOGRAPHY AREA

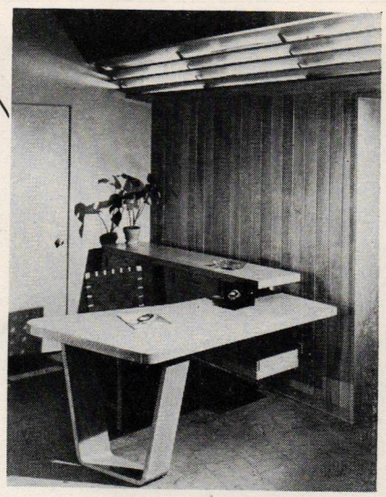


CURVED WALL FOCUSES EYE ON EACH DISPLAY IN TURN





LUSH TESTING ROOM SHOULD IMPRESS VISITING FIREMEN

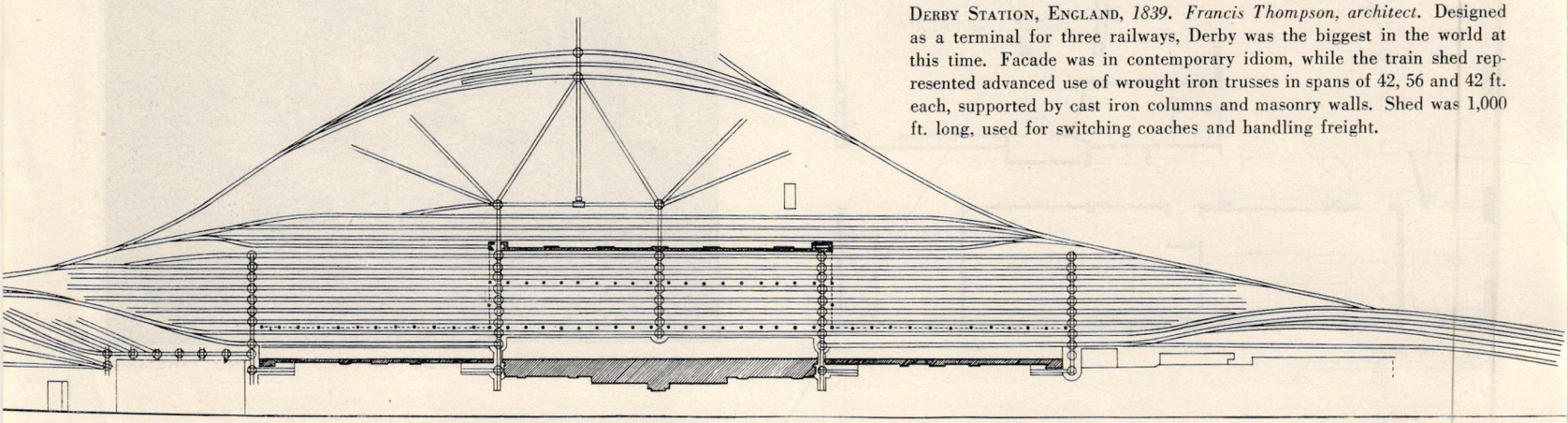


FINISHES AND EQUIPMENT

INSULATION: Ceilings—Sabonite acoustical plaster, U. S. Gypsum Co. FLOOR COVERINGS—asphalt tile, Johns-Manville Co. WALL COVERINGS—plaster and wood. FURNISHINGS—Artek-Pascoe and H. J. Knoll Associates. TRIM—wood, Woodwork Corp. of America. PAINTS—Stewart-Mowry Co. ELECTRICAL INSTALLATION: Fixtures—fluorescent, Jewel Mfg. Co.; Switches—Harvey Hubbell, Inc. AIR CONDITIONING—Moto Ventilating Co. CONTRACTOR: Sill Construction Co.



English industrial pioneering was eloquently expressed in the rapid development of railway train sheds . . .



DERBY STATION, ENGLAND, *1839. Francis Thompson, architect.* Designed as a terminal for three railways, Derby was the biggest in the world at this time. Facade was in contemporary idiom, while the train shed represented advanced use of wrought iron trusses in spans of 42, 56 and 42 ft. each, supported by cast iron columns and masonry walls. Shed was 1,000 ft. long, used for switching coaches and handling freight.



19th CENTURY TRAIN SHEDS

Seeds of our contemporary architecture are found in these early structures of the Iron Age. Research by C. L. V. Meeks* shows that railroads were the testing grounds for today's use of metal, glass and unencumbered space.

The railway is the perfect symbol of the first century of the Machine Age. Born from coal and iron of the eighteenth century, it succeeded in fusing the burgeoning inventive talents of the nineteenth century into a practical solution to the contemporary need for rapid transportation on a national scale. In a like manner the airplane has become the hopeful symbol of our own super Machine Age, providing rapid transportation on an international scale. In each mode of travel, the terminal is a knotty problem, from site location and planning through to covered loading of passengers and cargo. Covered loading for the train was the inspiration for the remarkable series of train sheds of the early 19th century, and covered loading for the plane is an obvious unsolved problem in the design of air terminals today.

A complete and dramatic development in architectural solution, the train shed is an important link in the long history of man's interest in vast interior spaces. From the thirty-foot maximum span of stone lintels in Egyptian times, through the remarkable domes, vaults and wooden trusses of the Classical, Mediaeval and Renaissance periods, man succeeded in expanding his interiors laterally or vertically, usually inspired by religious motives. The invention of iron and steel gave him the chance to create even greater interiors, and with the material requirements of the Industrial Revolution as his new—and meaningful—inspiration, he produced the railway train shed.

In the first half of our twentieth century, the engineering knowledge acquired in the train sheds of the nineteenth century has been put to material use in a thousand ways—for skyscrapers, sports arenas, hangars, and, most recently, for the mammoth aircraft factories of World War II. Today, with the perspective of time, we are beginning to realize an even more significant fact about these nineteenth century structures: they are seeds of a new architectural aesthetic. In them metal and glass were first used to enclose space, establishing completely new architectural relationships that our time is beginning to realize and to organize into a more perfect aesthetic statement.

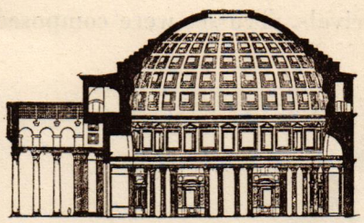
George Stevenson seems to have been the inventive genius for the first of the English train sheds in 1830. As chief engineer for the new passenger railway to run between Liverpool and Manchester, he was literally responsible for everything, including the station, which he designed complete with covered carriage loading, waiting rooms, booking offices, toilet facilities, and train shed spanning three tracks. Despite this excellent planning, railway traffic so multiplied that a new and larger station for Liverpool was required six years later. The second terminal was located nearer the center of town, as public prejudice against the Iron Horse was waning and greater passenger convenience was required.

In 1837, Euston Square Station in London began the series of great terminals to be constructed there during the next two decades. Expanding traffic required a larger train shed, and the builders turned to cast iron. Irregularity in train schedules soon required large waiting rooms for the three classes of passengers, and eventually even station hotels, the first of which were built in Euston Square in 1847.

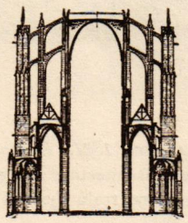
The town of Derby temporarily outstripped London in 1839 with the building of the largest station then extant, complete with a monumental forecourt. The *Illustrated London News* generously called attention (*Text continued on page* 108)



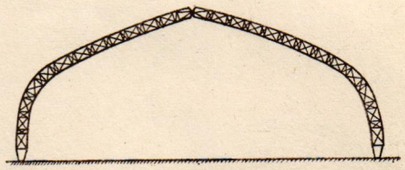
Temple of Amon, Karnak, Egypt, 1300 B. C.
Height, 80 feet; span, 30 feet; length, 320 feet.



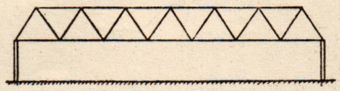
The Pantheon, Rome, Italy, 120 A. D.
Height, 143 feet; span, 143 feet; diameter, 143 feet.



The Cathedral, Beauvais, France, 1225-1568 A. D.
Height, 157 feet; span, 52 feet; length 215 feet.



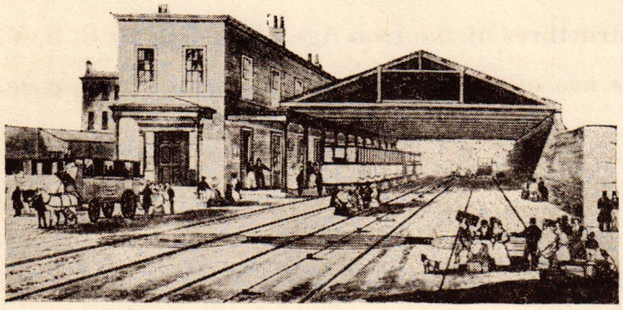
Galerie des Machines, International Exposition, Paris, 1889
Height, 147 feet; span, 362 feet; length, 1386 feet.

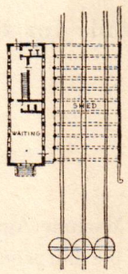


Boeing Aircraft Factory, Seattle, Washington, 1944
Height, 45 feet; span, 300 feet; length, 650 feet.

* Mr. Meeks has been studying early railway stations since 1942, consulting the leading authorities and libraries of this country and England to establish his collection of illustrations and data covering some 3000 stations throughout the world. He is at present Assistant Professor of Architecture and the History of Art, Assistant Dean of the School of the Fine Arts, Yale University and Vice President of the American Society of Architectural Historians.

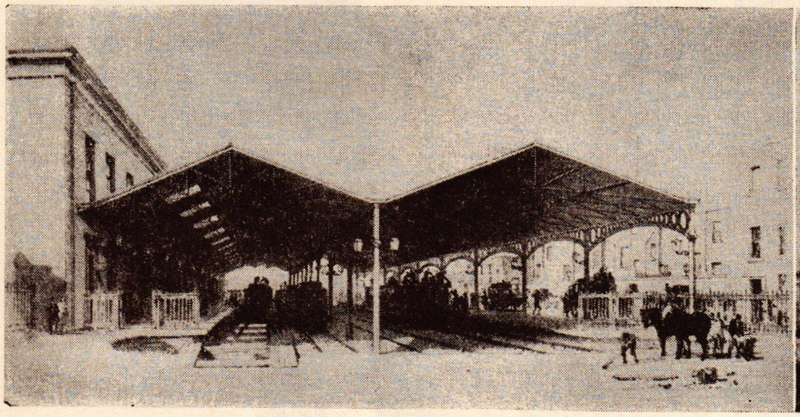
The first passenger station had a train shed supported by a wooden truss ... the work of locomotive designer and engineer George Stevenson.

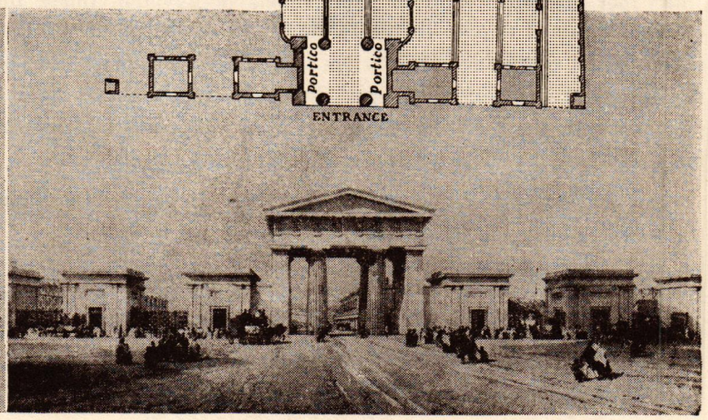


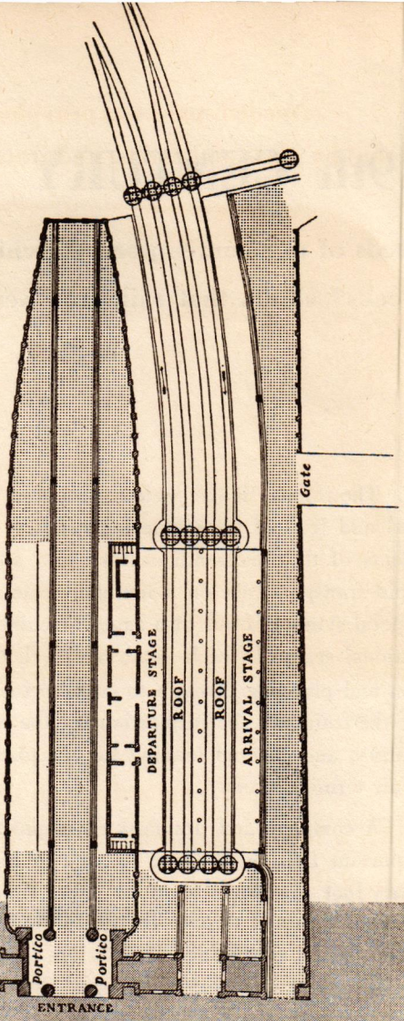


CROWN ST. STATION, LIVERPOOL, *1830. George Stevenson, engineer.* Though the highway coach obviously fathered its railway successor, covered loading at highway stations was extremely rare, so the train shed seems to be an invention. Here it is achieved by 48 foot wood truss of the "Queen" type familiar in Georgian Construction.

Expanding rail traffic soon required twin sheds—one for departures, one for arrivals. Trusses were composed of both wooden and cast iron members.



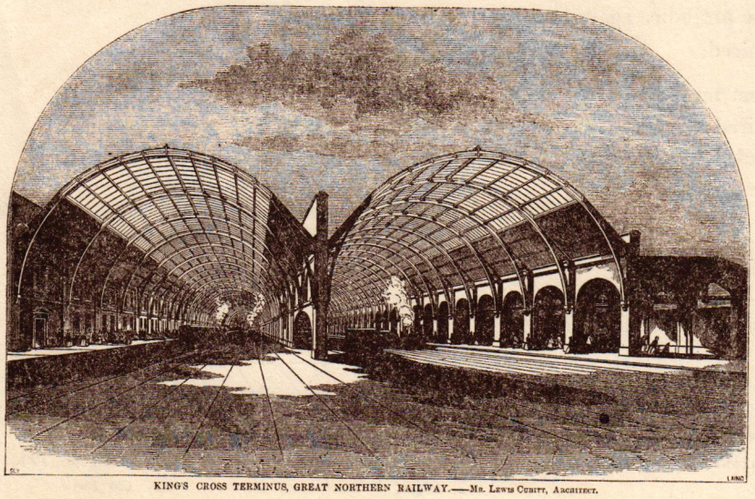




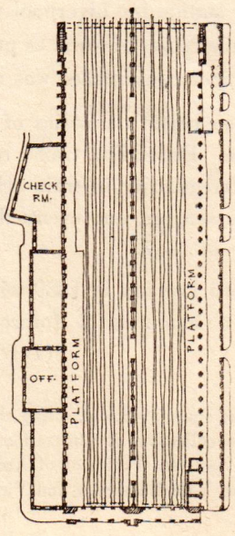
EUSTON SQUARE STATION, LONDON, *1837. Philip Hardwick, architect.* The nineteenth century division between architecture and engineering is expressed by Greek revival gateway screening cast iron train shed. Twin hotels were placed on either side of the entrance plaza in 1847.

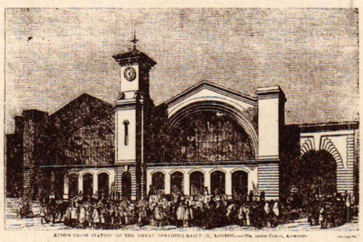
TERMINAL PLAN represents remarkably able solution of new problem. Carriages of departing passengers pass through central gate to terminal building where passengers wait until time to board train from adjacent platform. Arriving passengers use platform at opposite side of shed, leave station through side gate.

Wooden arches with wrought iron shoes were next used to create a pair of handsome barrel vaults roofed largely by glass.



KINGS CROSS TERMINUS, GREAT NORTHERN RAILWAY.—MR. LEWIS CUBITT, ARCHITECT.





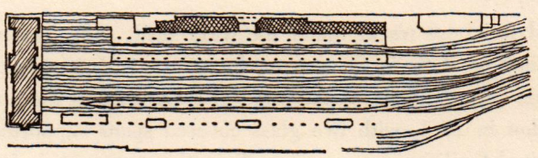
KING'S CROSS STATION, LONDON, *1851. Lewis Cubitt, architect.* Like the nave of the Crystal Palace built in the same year, this shed has a roof of glass supported by wood. The arches of 105 foot span are of a laminated type previously used on railway bridges. Projecting wrought iron shoes convert the horizontal thrust of the arches to a vertical component, eliminating tie rods. Passenger platforms are approaching level of coach floors.

Needed space was provided by wrought iron arched ribs attached to cast iron columns to form three parallel spans roofed by glass and corrugated iron sheets. Platforms were added along column lines.



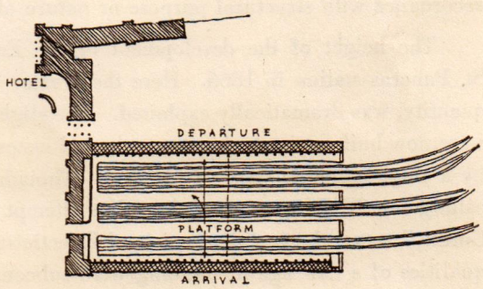
THE PADDINGTON STATION OF THE GREAT WESTERN RAILWAY.—*The Joint Design of Mr. I. K. Brunel and Mr. M. D. Wyatt.*

PADDINGTON STATION, LONDON, *1855. I. K. Brunel, engineer, M. D. Wyatt, architect.* The arch principle of King's Cross station is here expanded by substitution of iron for wood to provide three spans of 68, 102 and 68 feet, respectively. Columns are bolted to large masses of concrete to resist the horizontal thrust of the arches. Station hotel is across one end of shed, a plan followed in many subsequent terminals. Departure, arrival and station facilities are still chiefly along shed's outer sides, central platforms being used only at rush hours. An attempt was made to unite engineering with architecture, as "Mr. Brunel [the engineer] was assisted in the design of such ornament as was used by the architect, Sir Digby Wyatt."

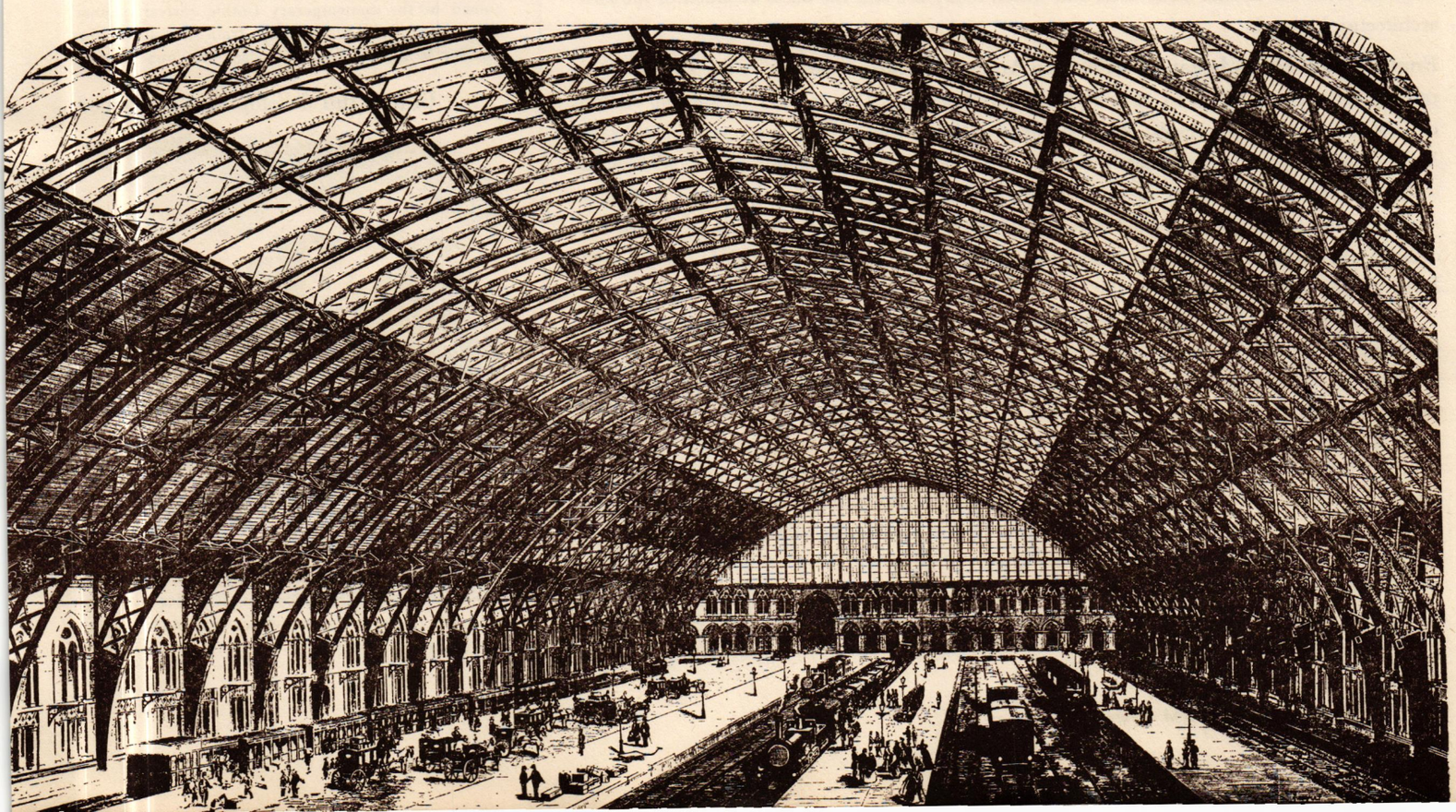


Peak of England's train shed development was reached when all tracks, platforms and carriage ways were placed under a huge single span created by arched open web girders using the then-new potential of steel. This dramatic scheme formed the prototype for many subsequent stations and exhibition halls in Europe and America.

ST. PANCRAS STATION, LONDON, *1866. W. H. Barlow, engineer.* Upon completion this remarkable shed was largest single span interior in the world, being 210 ft. wide, 90 ft. high, and 660 ft. long. Two subway lines ran beneath the station, and this was used as an excuse for avoiding intermediate supports, but the competitive spirit of the age—line against line, engineer against engineer—was the true reason for such magnificence. As the number of intermediate train platforms now required a platform at the end, the hotel entrance was moved to one side. Plate glass covers almost the entire roof and encloses both ends. The continuous arches spring directly from the pavement rather than from columns, and though abutments are ample, 3 in. steel tie rods run beneath the tracks as a safety factor.



INTERIOR OF THE NEW ST. PANCRAS STATION, MIDLAND RAILWAY.



In America railways appeared almost as early as in England, but necessity for building vastly longer routes through sparsely populated regions resulted in small, simple stations.

to its "prodigious extent, its incomparable plain form, its light but beautiful roof, its refreshment rooms, its fine hotel." In plan the Derby station differed from the majority in that departing and arriving passengers all passed through the long terminal building. This layout was required by the through track, as the Derby station served as the junction of three lines, which jointly used the booking offices and waiting rooms. Derby's train shed represented an advancement beyond that of Euston, in that there were three spans of greater width supported by extremely delicate Howe trusses made entirely of wrought rather than cast iron.

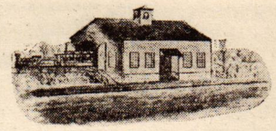
The need for more tracks under the train shed, and consequently for more daylight, led to the adoption of the arch system of support, with its greater span uninterrupted by truss members. An example of this type of train shed is the one at King's Cross station built in London in 1851, with two glass covered spans supported on arches of laminated wood. Terminal facilities are grouped efficiently at the sides of the sheds, whose ends are allowed to dominate the station's entrance facade for the first time.

The layout of King's Cross was repeated and enlarged in Paddington station four years later. The arches were given greater width, and an additional span was added to form a shed of three aisles. Terminal facilities were still grouped along the shed's sides, and a hotel was placed across the end facade. Engineer and architect worked together, their startlingly advanced objective, as recorded in *The Builder* of 1854, being ". . . to avoid any recurrence to existing styles, and to try the experiment of designing everything in accordance with structural purpose or nature of the materials employed, iron and cement."

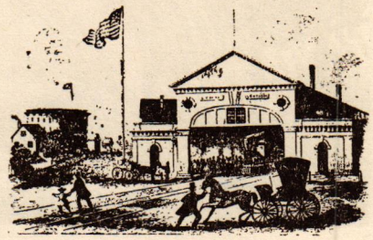
The height of the development of the English train shed was reached at London's St. Pancras station in 1866. Here the greater strength of steel, recently made available in quantity, was dramatically exploited. The slightly perforated webbed arches of Paddington were now built up in steel open work, and instead of three spans, the entire shed was roofed by a single gigantic span of 210 feet. Though the *Building News* of London of 1875, in calling the St. Pancras shed the "first attempt to blend architecture and steel together in Gothic," stated the incipient spirit of Eclecticism then overtaking architecture, the inherent qualities of a new age of building were subconsciously felt by all who entered the station. For here the nineteenth century made a great and fearless venture into the unknown regions of steel and glass, discovering engineering principles and aesthetic possibilities which inspired countless similar structures, and which today are still the basis of much of modern architectural thought.

English train sheds began to influence American station design in the 1850's. Our railway system now had need of really large terminals, and Chicago's Great Central station of 1856 is typical of the result. After the interruption of the Civil War, American railways began another series of terminals in the 70's with the completion of the old Grand Central station in New York in 1871. Here, London's St. Pancras station was imitated on a slightly smaller scale, and a style set for large, single span train sheds that was followed until the close of the century, typical examples being Broad Street station, Philadelphia, 1894, and Pennsylvania station, Pittsburgh, 1902.

The end of the great train sheds in both England and America was caused by the same force that created them: expanding traffic. With the opening of the twentieth century, all important terminals needed more and longer platforms, and greater space for crowds in a concourse heading all the platforms. It was found that low sheds over each platform were more efficient than a single towering shelter, and far less costly; and the majority of stations erected since 1905 have had small sheds of this individual platform type. In a few cases, like Union Station in Washington and Pennsylvania Station in New York, the great metal and glass roofs have been transferred to the Concourse area. But the exciting panorama of many trains coming and going in a single, vast, unencumbered interior is seldom found. Nevertheless, the influence of the nineteenth century train shed is felt in countless engineering marvels of today, and in the evolution toward a finer architectural aesthetic of tomorrow.



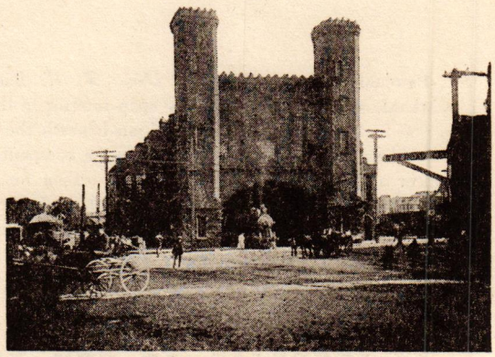
MARBLEHEAD, MASS., *1839*. An early American station to provide covered loading was this typical frame building through which train passed.



SECOND RAILROAD STATION AT LYNN, BUILT IN 1848

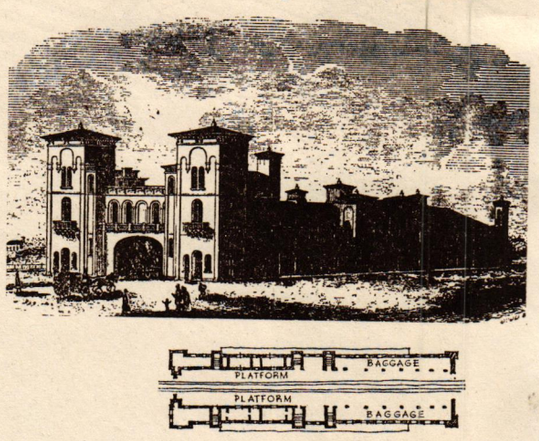
LYNN, MASS., *1848*. Two tracks ran through the building, providing sheltered platforms for trains going in both directions. Shed roof was simple wooden truss. Wings contain offices and waiting rooms.

American tendency to incorporate shed into station building continues . . .



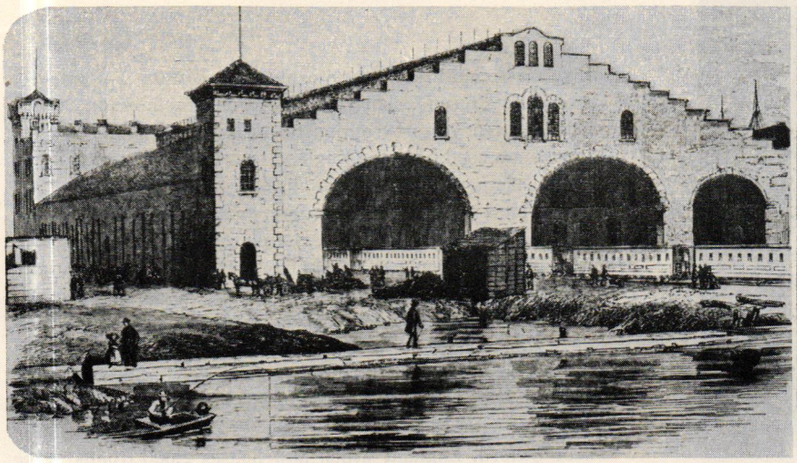
SALEM, MASS., *1847*. Constructed in stone and costumed in the contemporary Gothic revival manner, this station is still in use. High train shed dominating interior is lighted by large glass windows at ends.

. . . Until a full development is reached.



HARTFORD, CONN., *1850*. Two track shed was lengthened here to cover entire train. Station was used by three railways with individual facilities for each grouped along platform sides. Iron members appeared in shed trusses.

Influence of England's great train sheds began to be expressed in America in the middle 50's . . .



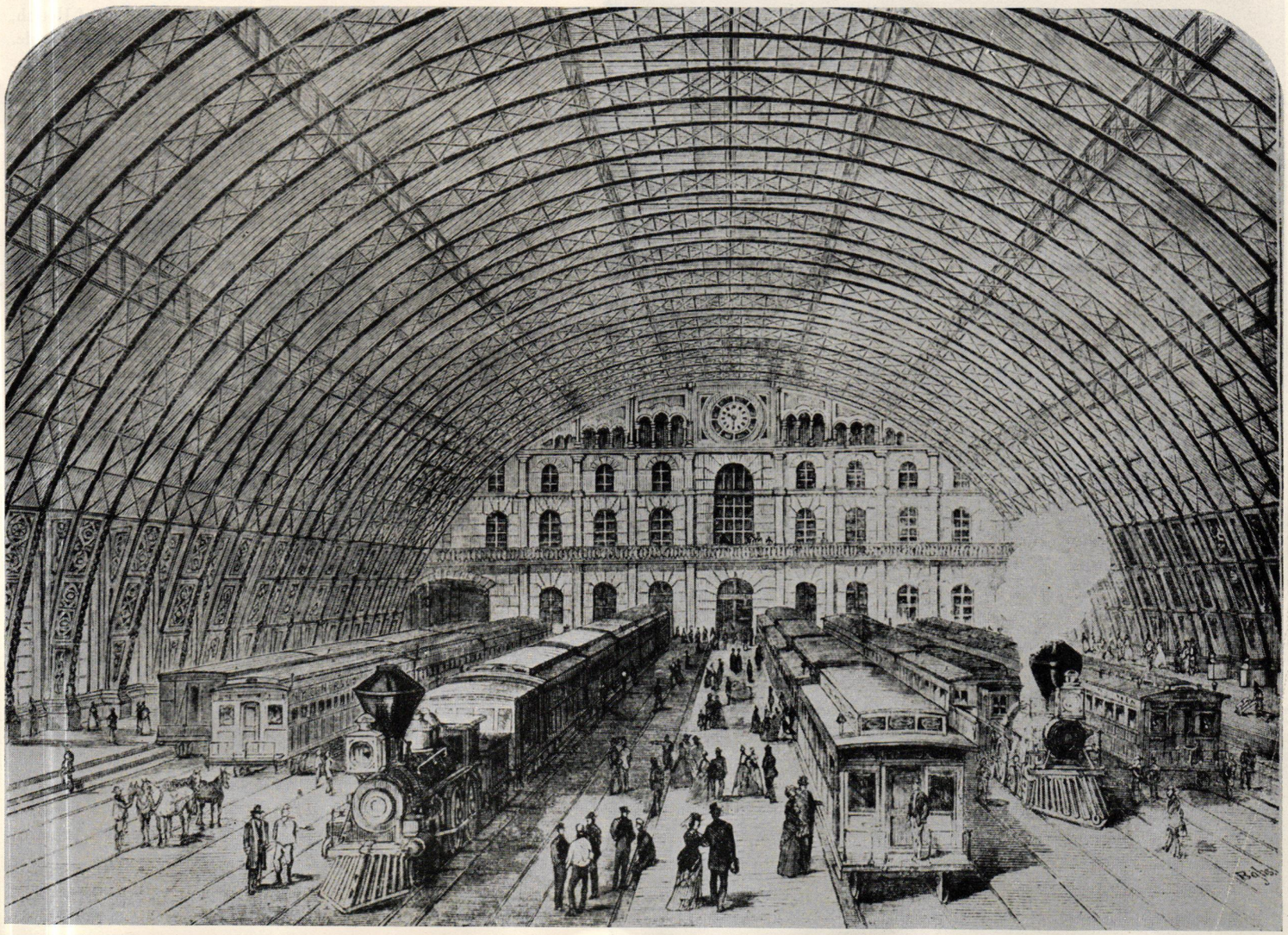


GREAT CENTRAL RAILWAY STATION, CHICAGO, *1856.* A bowstring truss of approximately 70 ft. span covered the train shed for this hub station of the western frontier. Though English inspiration was in the truss system, American tradition still attempted to incorporate shed and station into a single building.

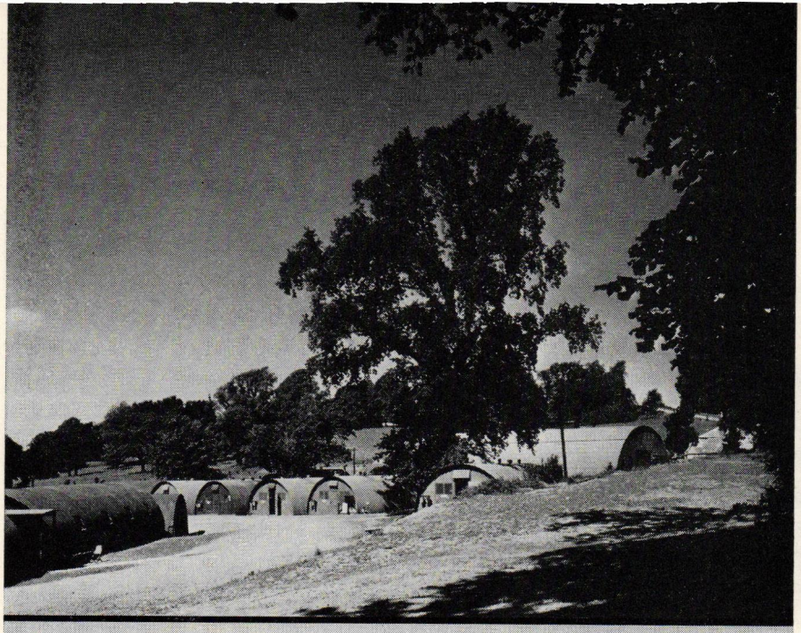
. . . and direct imitations of English sheds appeared in 1870, to be repeated until beginning of twentieth century.

FIRST GRAND CENTRAL STATION, NEW YORK, *1871.* Built on the site of the present station at 42nd Street, this vast shed was the largest interior in America at the time, being 200 feet wide and 600 feet long. Its open-web arched girders, frankly imitating those of London's St. Pancras, are of cast and wrought iron rather than of steel, which still was scarce in this country.

Separate ticket and waiting facilities for each of the three lines using station surrounded shed on sides and end, topped by a seven-story office building in the style of the Tuileries in Paris. Exterior trim was in cast iron painted white to imitate marble, and the station was called most impressive building in America after Capitol in Washington.



EMERGENCY HOUSING—







Official U. S. Navy Photograph

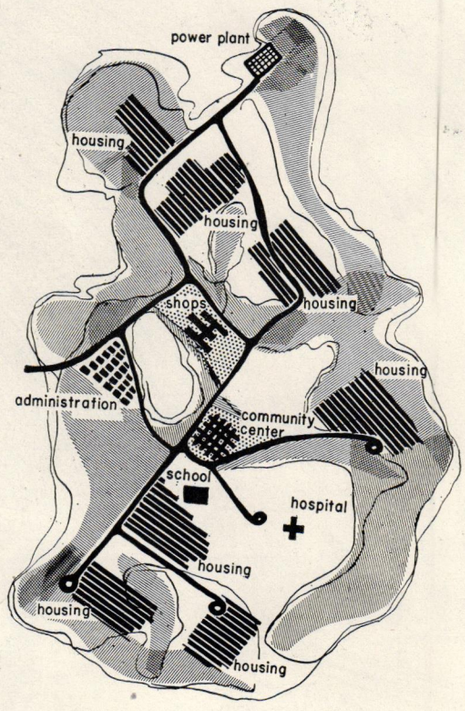
Typical of military installations throughout Britain now being vacated by American troops, is this encampment on a pleasant rural site. Such bases, with their scattered arrangement of huts linked by winding roads, can be cheaply converted for civilian use and offer a possible stop-gap solution to the crucial housing shortage.

Like most countries in the world today, Britain is faced with a crucial housing shortage. Permanent rebuilding, which will take ten years by optimistic forecast, cannot relieve the immediate need. To ease England over the worst hump, therefore, a temporary program is obviously necessary.

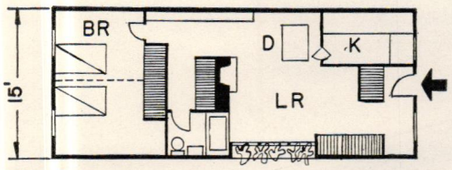
The most practical idea to date, and one which might well be applied in other countries, is a plan for converting vacated military encampments to civilian use. Such installations, found near every large town in England, can be made usable with a minimum of time, labor and material, leaving the bulk of Britain's resources for permanent building.

To provide a working example for this stop-gap solution, three American soldiers—Sgt. Ben Rosen, Cpl. Harold Jensen, and Cpl. Vincent Solomita—made a study of their own base near Oxford, England which now houses 2,000 troops. Like most of the military sites, it is within ten miles of town, a major consideration since housing must be provided where the shortage exists. In addition, the arrangement of residential areas around the public camp buildings resembles the most advanced city plans. Nearly five miles of paved roads link outlying sections with the camp center. Electric power, water, sewage disposal, telephone and telegraph facilities are already set up. Thus, most of the major construction problems confronting housing planners are taken care of.

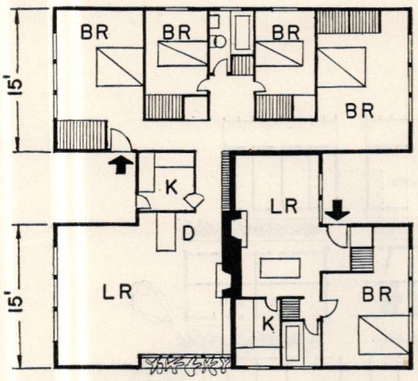
Main conversion problem is changing the stark character of military huts into something resembling home. This the volunteer planners have accomplished by adding porch wings, redesigning interiors and landscaping. The small Nissen huts are converted to detached dwellings, larger Romlin huts into apartments. The mess area becomes a shopping center, the Army Command Training School a grammar school, and the community center is enlarged for civilian needs. The plan, which has been favorably received by the Ministry of Health, now awaits action by that organization and the British people.



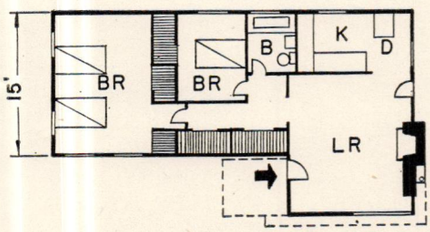
Existing military installations could provide stop-gap shelter for Britain's bombed out citizenry.



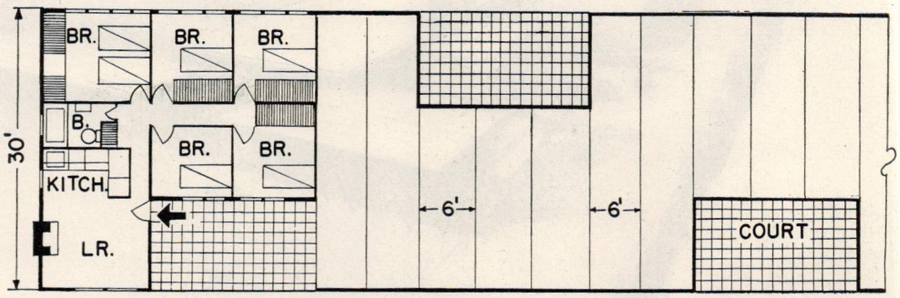
SCHEME 1 converts a Nissen hut into living and sleeping quarters for two people with a minimum of change.

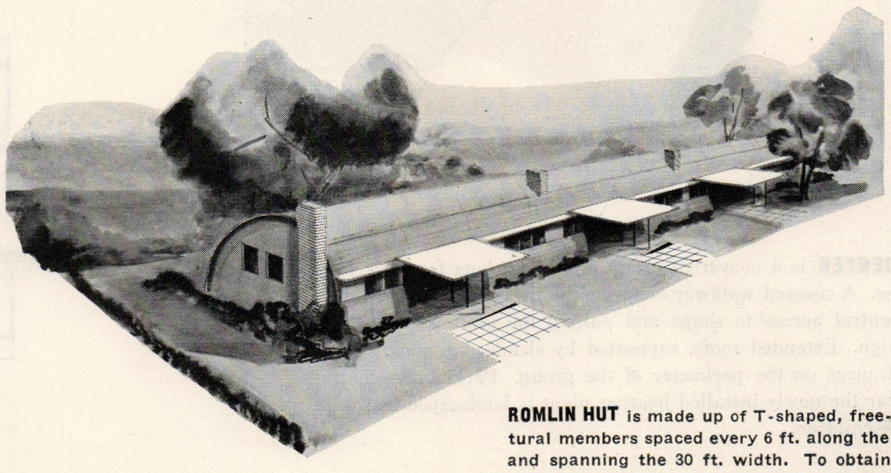


SCHEME 2 joins two huts with a 20 ft. wide corridor which allows replanning of space to provide large and small apartments.

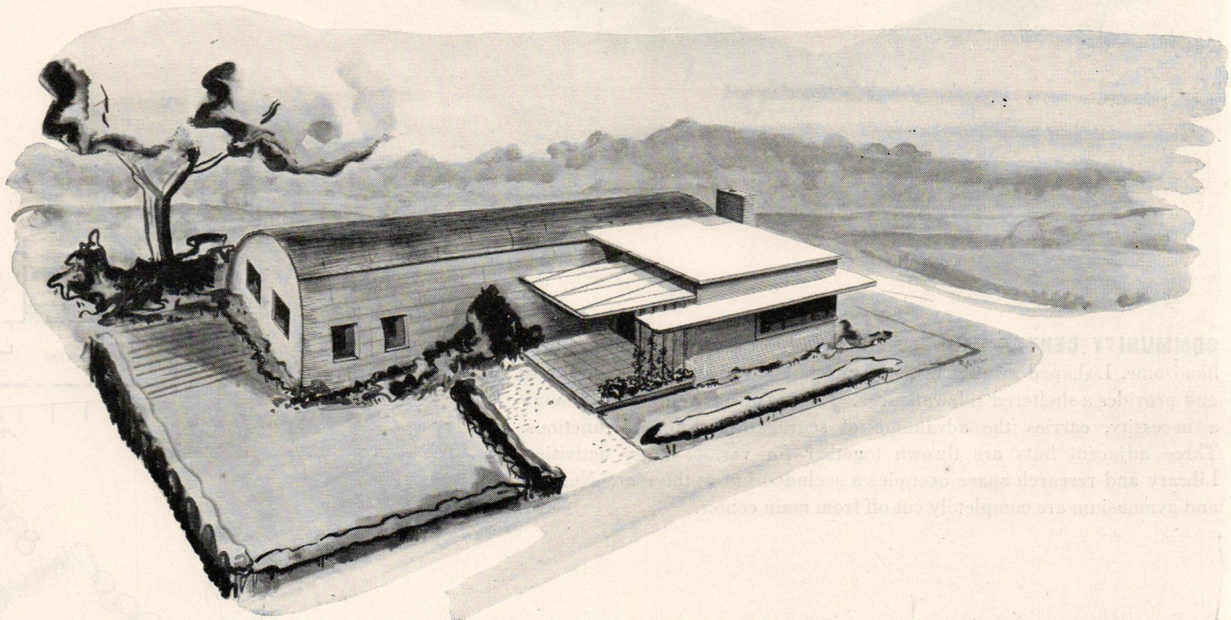


SCHEME 3 adds a small living room wing to a single hut, thus allowing space for two compact bedrooms.

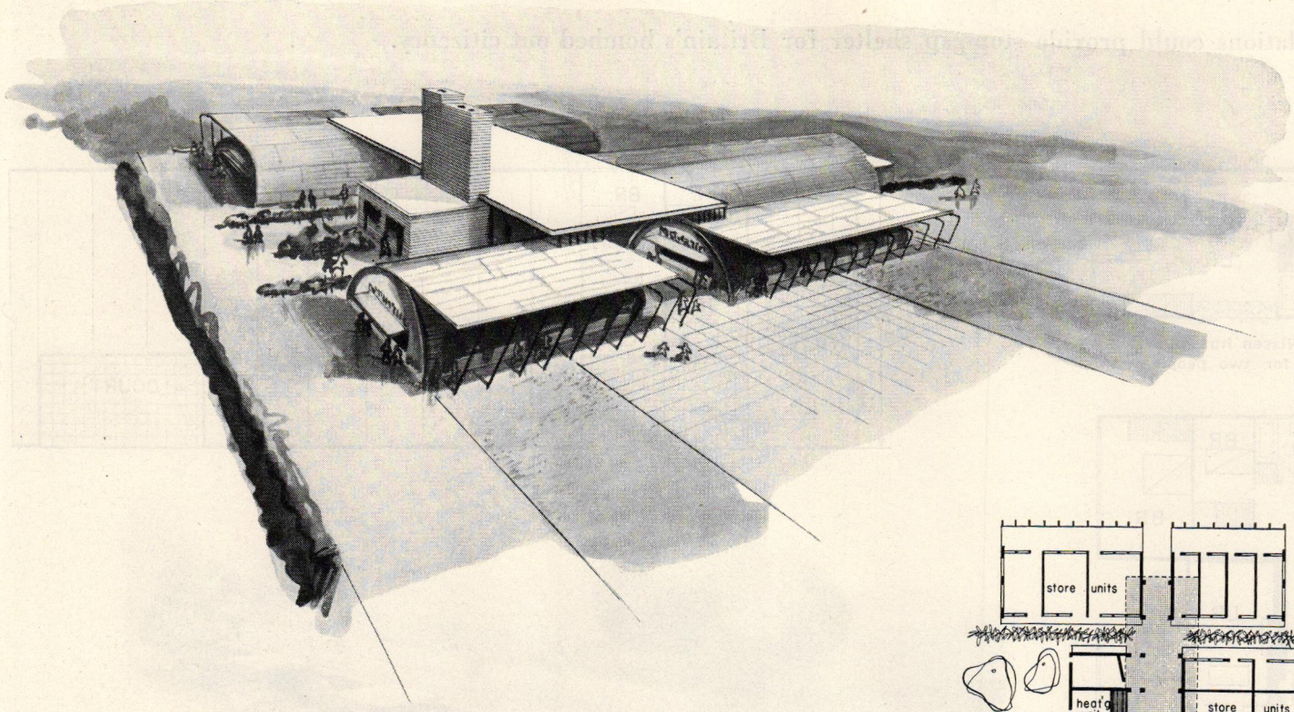


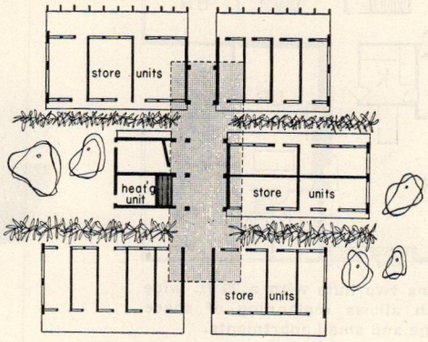


ROMLIN HUT is made up of T-shaped, free-standing structural members spaced every 6 ft. along the building length and spanning the 30 ft. width. To obtain adequate light and ventilation, wall is recessed between these members at intervals and new partitions built with adequate windows overlooking porches thus provided.

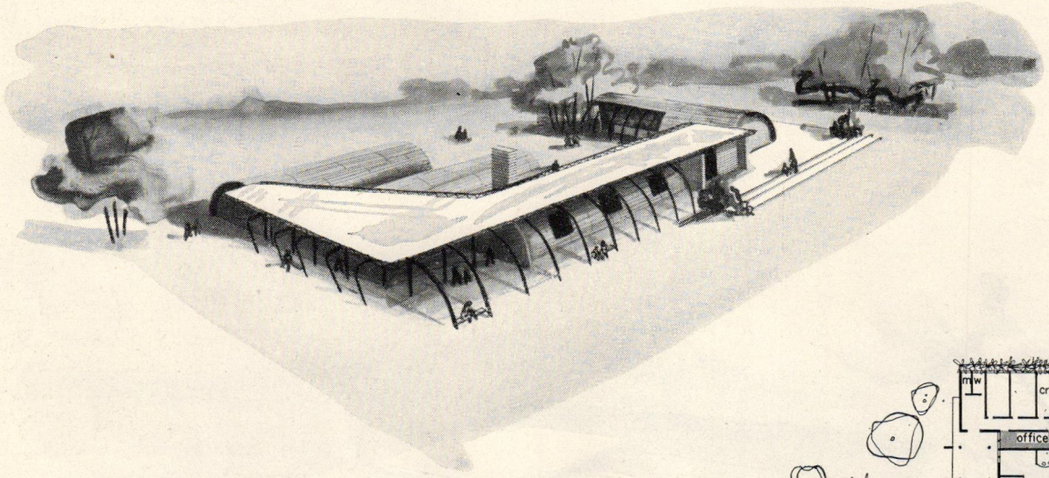


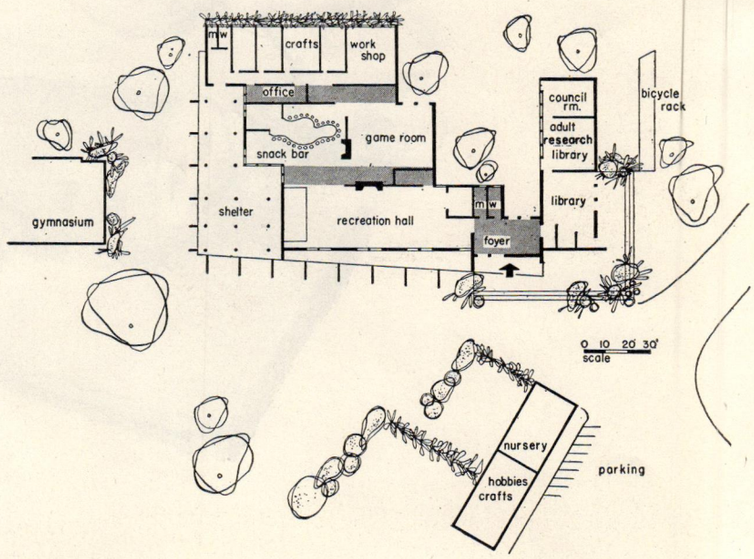
PERSPECTIVE of converted hut illustrates the improved appearance achieved by adding a small wing. Landscaped terrace and garden area are shielded by a hedge, thus providing the privacy so important to an English family.





SHOPPING CENTER is a converted group of Romlin huts formerly used for army mess. A covered walkway connects the five buildings, providing convenient central access to shops and pulling the scattered huts into a unified design. Extended roofs, supported by slender columns, shelter the store entrances on the perimeter of the group. Part of the central open area near the newly installed heating plant is landscaped as a safe play space for children.



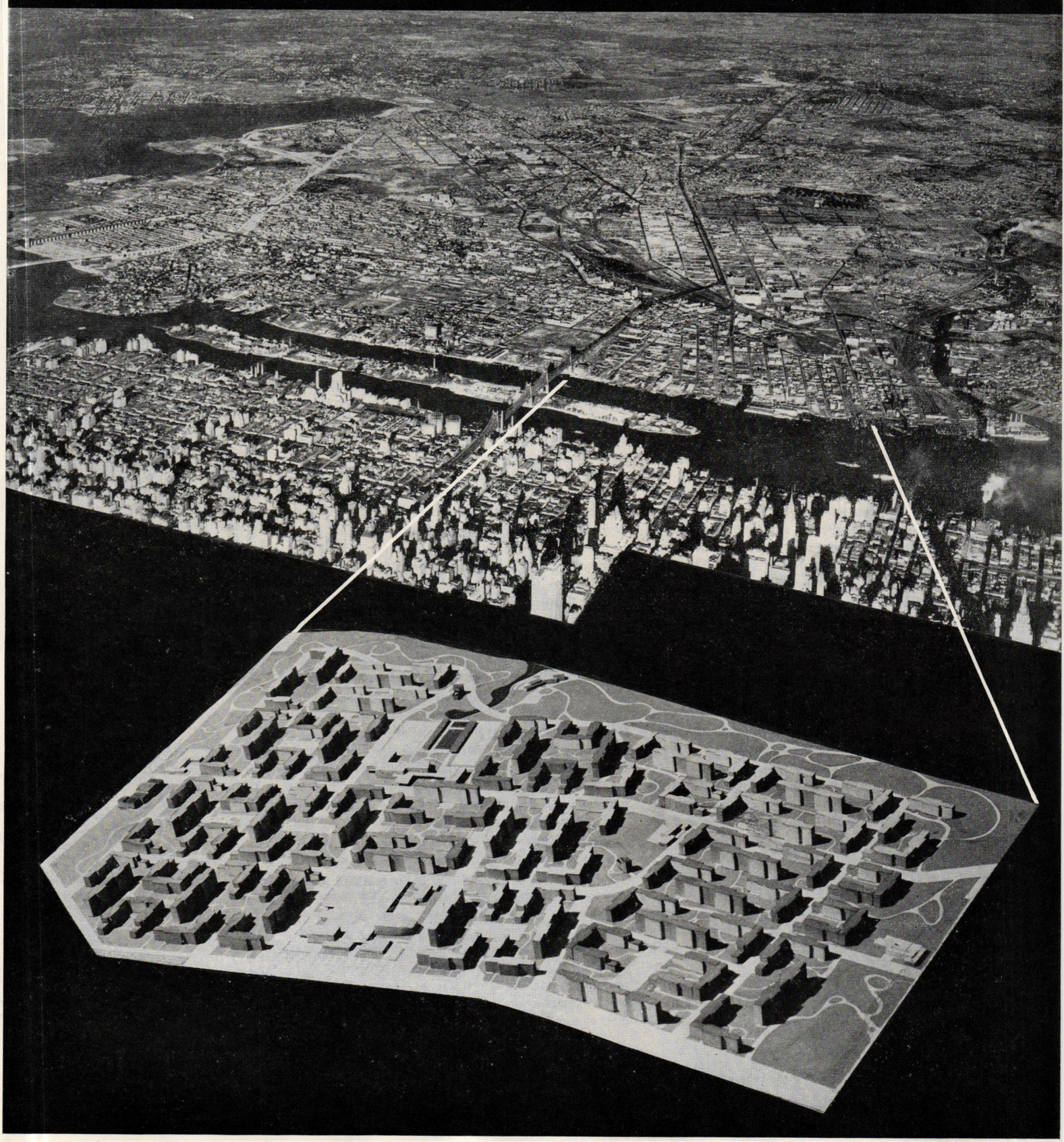


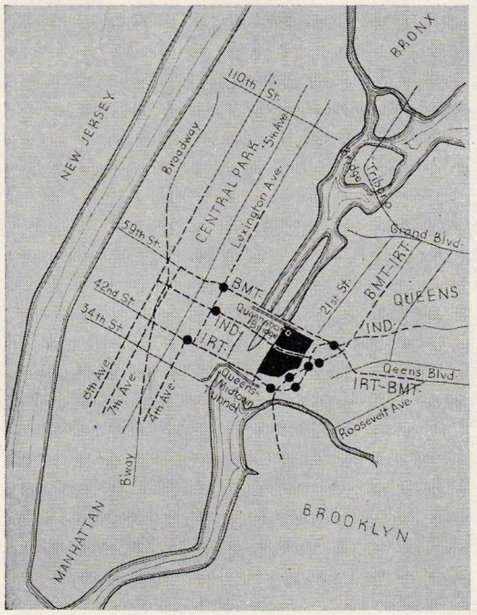
COMMUNITY CENTER sheds its military aspect with the addition of a handsome, L-shaped awning which connects and unifies the hut grouping and provides a sheltered sidewalk area. The use of separate huts, although a necessity, carries the advantage of segregating different functions. Three adjacent huts are thrown together for various noisy activities. Library and research space occupies a secluded hut at the rear. Nursery and gymnasium are completely cut off from main center.

44. PROPOSED CITY REDEVELOPMENT

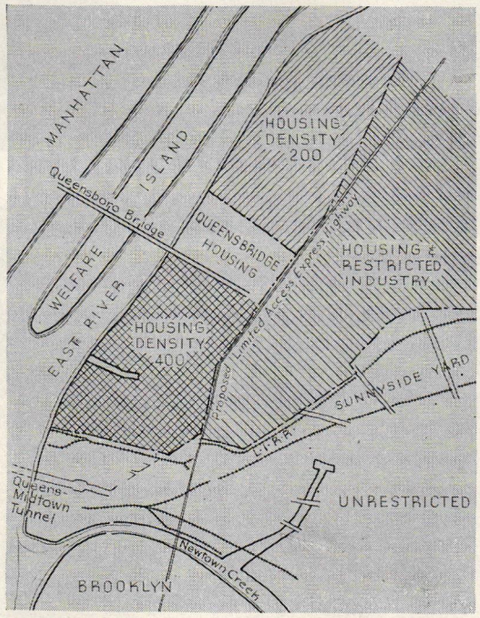
A plan for the rejuvenation of a blighted industrial area in the heart of New York City.

POMERANCE & BREINES, ANDREW J. THOMAS, PERCIVAL GOODMAN, Architects

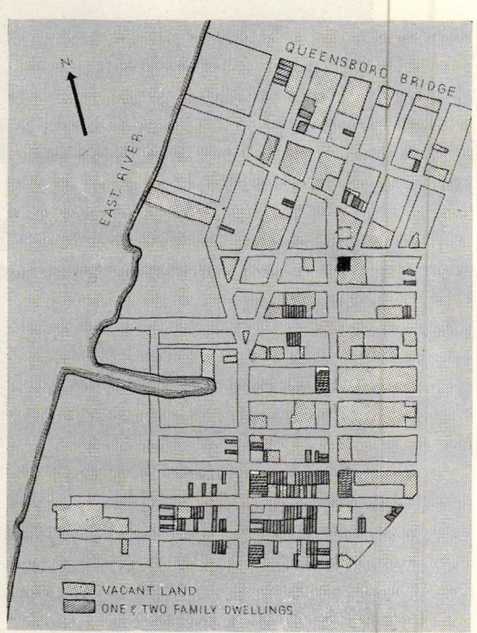




Underground and surface transportation directly connects Long Island City with four boroughs.



Proposed zoning will divide the development into three areas: two residential, one mixed.



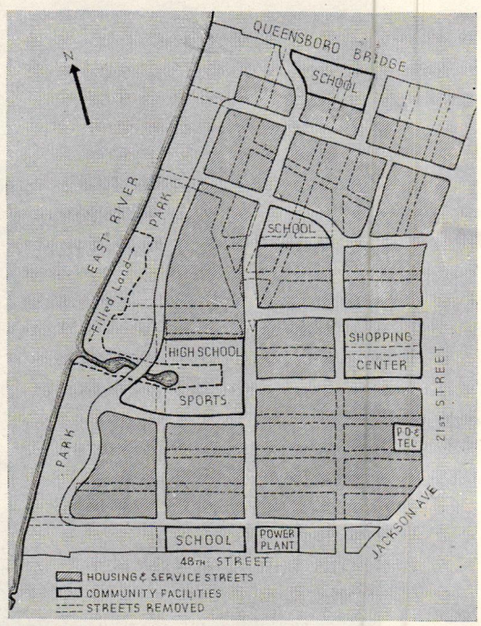
Sparse residential growth and a quantity of vacant land are a burden to the city economically.

The present plight of Long Island City is by no means exclusive to New York. Most of America's metropolitan centers have one or more sections suffering from similar obsolesence and blight. Flanked by the East River and Manhattan island on the west and the borough of Queens on the east, Long Island City was nevertheless completely overlooked during the flagrant exploitation of Queens during the early part of the century and has been ever since. It was already partially built up when suburban development reached its heyday and eager speculators passed it up for fresh, unimproved land beyond. Even by 1910, it had a clearcut industrial character and was later zoned for such use—a measure which unfortunately discouraged residential building and left a myriad of small parcels of vacant land spotted at random between existing factories. Since 1915 three subways and numerous surface transportation lines have been built through the area to make connections between Manhattan and Queens, but still it has reaped little or no improvement from its newfound strategic location. Further in its favor as a convenient residential section is the Queensboro Bridge approach located at its very core and the new Queens-Midtown tunnel at its lower extremity.

Despite its location (fifteen minutes of easy travel to Times Square at a five cent fare), and good transportation facilities, Long Island City's present condition is one of advanced decay. Though the huge Sunnyside freight and the passenger yards belonging to the Pennsylvania Railroad inject some life and small commerce, their inland site has tended to draw building and development away from the waterfront, while the existance of two car-float terminals from Staten Island and New Jersey has rendered the riverfront anything but desirable for residence. As a result, vacant land abounds; values are low, ranging from 50 cents to $2.25 per sq. ft., and lowest near the shoreline. According to the 1930 census, Long Island City's population was only 40,800 representing a density of about 23 persons per acre. What dwellings exist, are, for the most part, slums or near-slums, having been built prior to 1899.

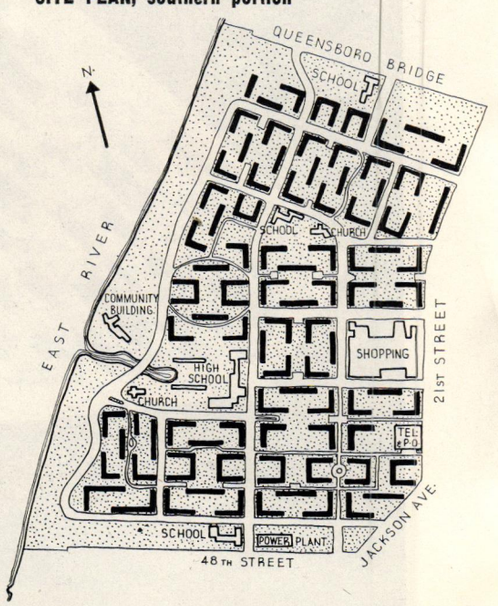
Because of its size and proximity to mid-town New York, it is only logical that such an area should be a healthy, active and important part of greater New York and not the liability that its delinquent taxes and low values represent today. With this in mind the architects have laid out an elaborate scheme for redevelopment extending from Hallet's Cove at the north to 35th St., at the south. While the actual work was largely done on the initiative of these men, several insurance companies are currently considering the scheme. Its most impressive feature is the proposed 114 acre Riverview Community housing project which takes full advantage of a waterfront location and the striking skyline view offered by Manhattan's tall buildings across the river. It is intended to house some 50,000 persons (because of present low density, this would call for rehousing only about 5,000). Privately financed and paying full taxes, it is estimated that rents would run between $11.50 and $25.00 per room per month. The project, which encompasses about one-quarter of the total area is bounded to the north by the Queensboro Bridge approach and the existing Queensbridge housing project. Further north, and also on the river, is planned another residential section with a density of about 200 persons per acre. Between the latter and the Sunnyside yards to the east would be located a third neighborhood zoned for housing and restricted industry. The planners forsee that many existing non-nuisance factories could be retained in this area and converted into local assets rather than liabilities. They feel that the existing street pattern should not be altered but merely blocked at given points to increase land values and improve the appearance of the community as a whole.

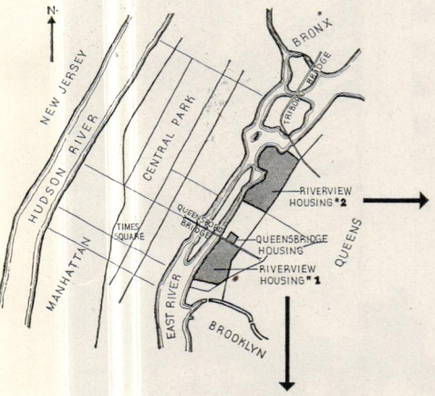
Naturally, such a plan calls for rezoning of the "work-residence" type with its obvious advantages: lower transportation costs for the worker who can live near his place of employment, a rise in land values in the sections now overzoned for industry, replacement of industrial slums with parks, playgrounds and other public conveniences. Also included in the plan is provision for the improvement of existing overhead transportation structures and replanning of through traffic at Queens Plaza, a nearby intersection and passenger transfer point of intense congestion.



Removal of some streets in existing grid system creates a good neighborhood street pattern.

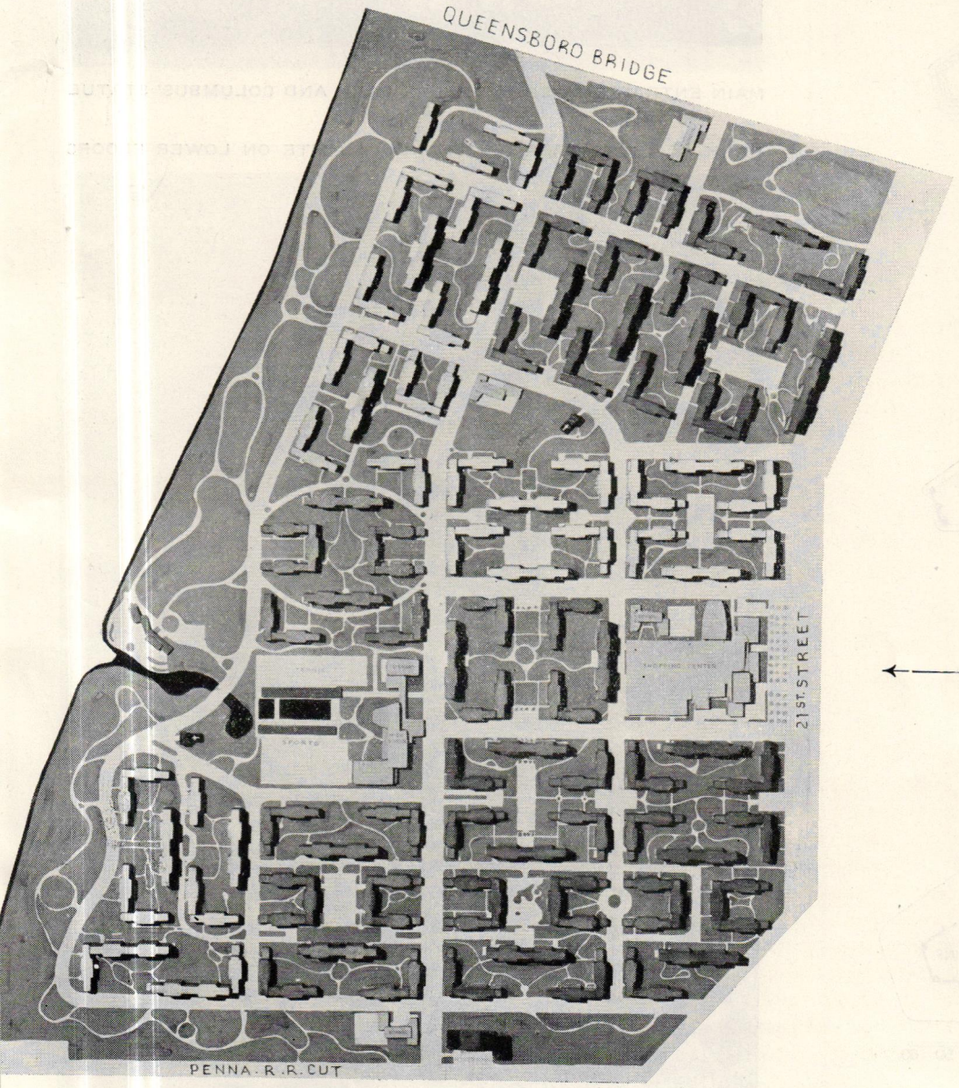
SITE PLAN, southern portion







NORTH END of redevelopment is composed of a residential section which anticipates the lowest density. In this portion little of the existing gridiron street system remains visible. Buildings are arranged in a free pattern following the contour of the shoreline and the terrain which rises to the north. Most of the immediate waterfront is given over to parks, sports areas and public buildings with pedestrian access. No automobile channels are included in the bay section.

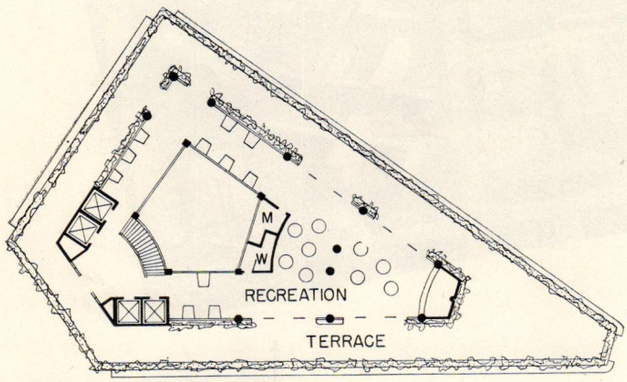


SOUTHERN PORTION is composed of large apartment buildings of varying heights, laid out in a rectangular pattern. Three important considerations are evident in the plot plan: level topography, retention of a grid street system and orientation of a maximum number of units to the south. A small inlet, the only natural adjunct of the site, is dramatized by spanning it with a river drive and locating a group of community buildings at its head. This group contains a school, a library, an outdoor sports field and several tennis courts. A project shopping center is located on the 21st St. side of the site. Freely curved pedestrian walks give a park-like atmosphere, tend to counteract the monotony of the geometric street pattern.

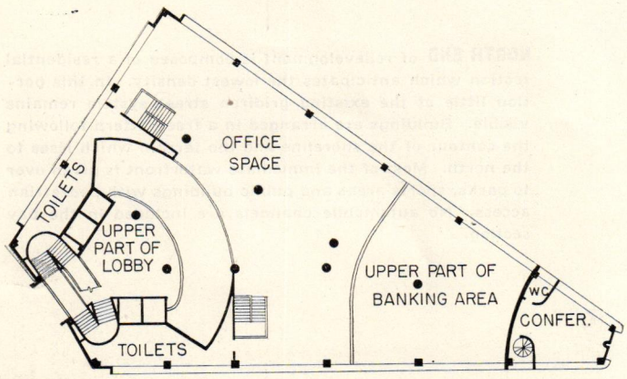
45. OFFICE BUILDING, MEXICO CITY

CARLOS OBREGON SANTACILIA, Architect

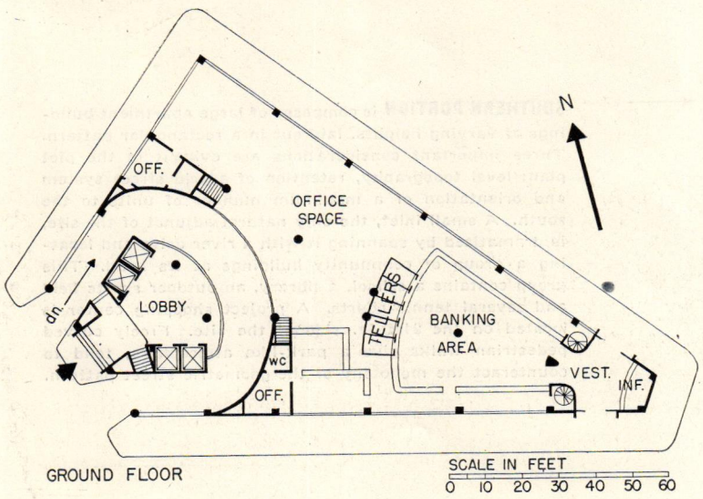
This parti, winner of a recent bank-office building competition for Mexico's largest insurance company, will be erected on the site of an existing government building. It occupies a full city block. The most important considerations posed by the program were orientation and the relation of the main entrance to the important Avenue de la Reforms which borders the southern side of the lot. The entrance to the office space faces a planted traffic circle in which stands one of the city's most imposing monuments, has a circular interior ramp for automobiles dropping passengers but no provision for indoor parking. Both this lobby and that of the bank are two stories high. The large open areas on the ground and mezzanine floors will house the bank's clerical departments. At the fourteenth floor setback is a tenants' recreation area with facilities for sun bathing, light dining and general relaxation.



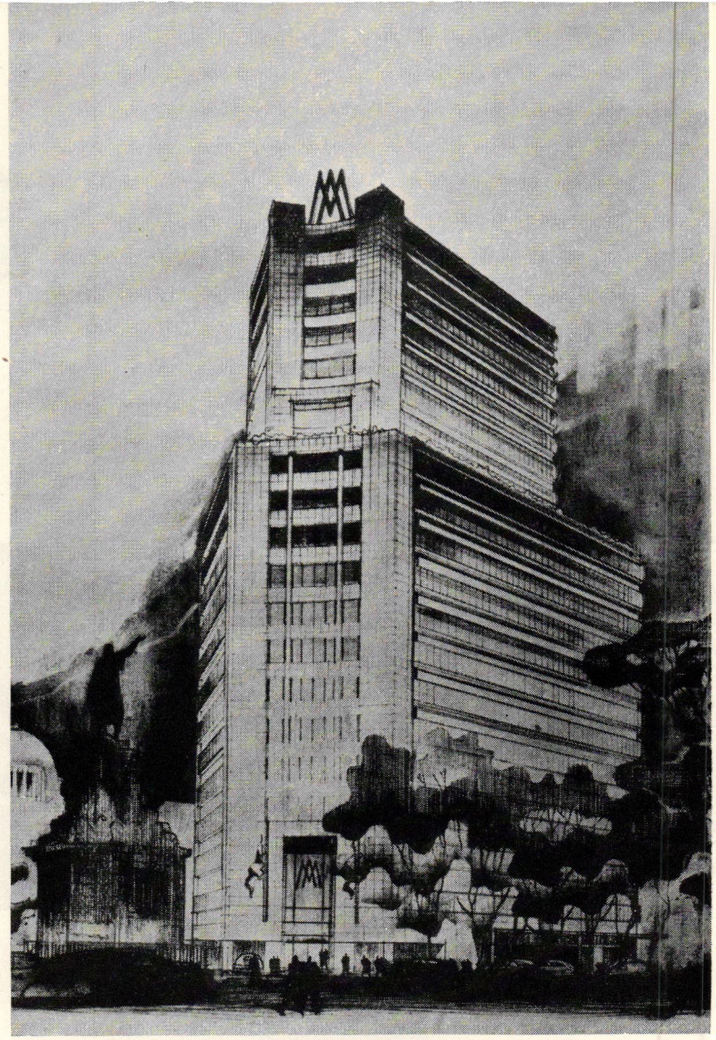
FOURTEENTH (SET BACK) FLOOR



MEZZANINE

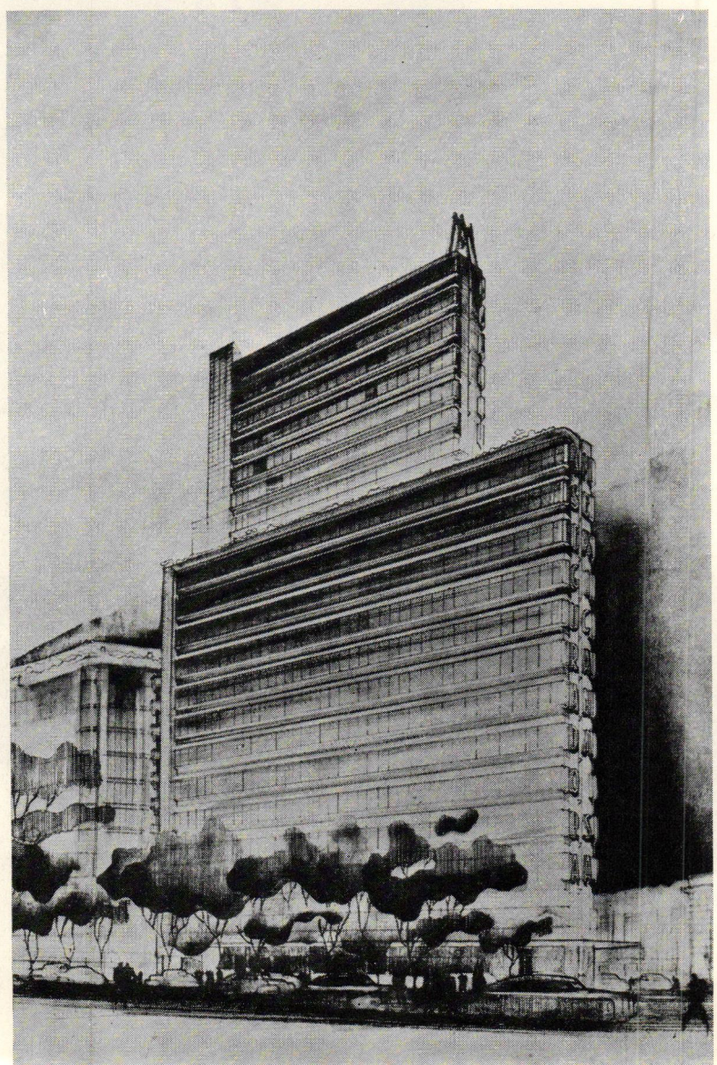


GROUND FLOOR



MAIN ENTRANCE FACES CIRCULAR PARK AND COLUMBUS' STATUE

BANK OCCUPIES APEX OF TRIANGULAR SITE ON LOWER FLOORS



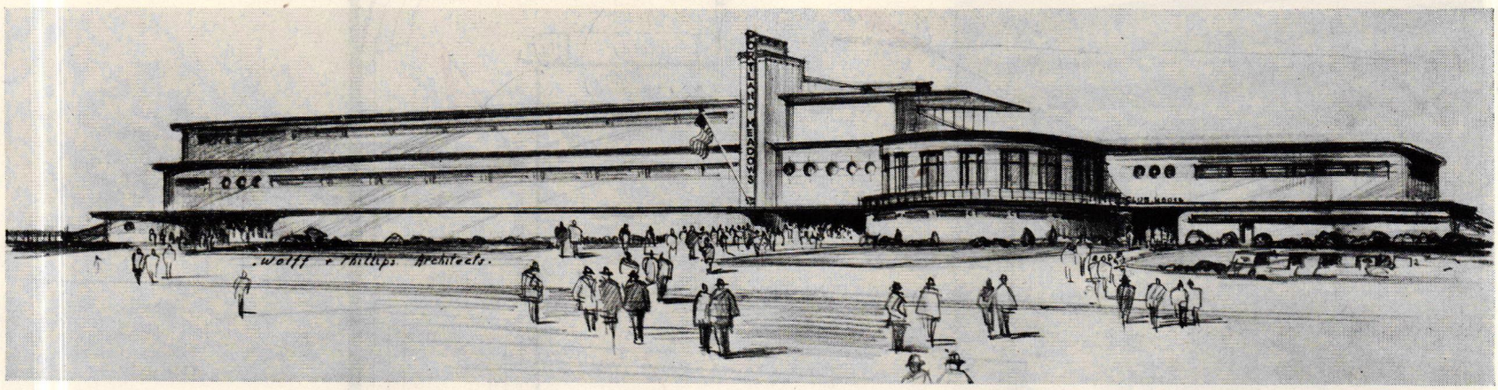
46. RACETRACK

Designed to serve a city of moderate size, all spectator conveniences at this course are in one building.

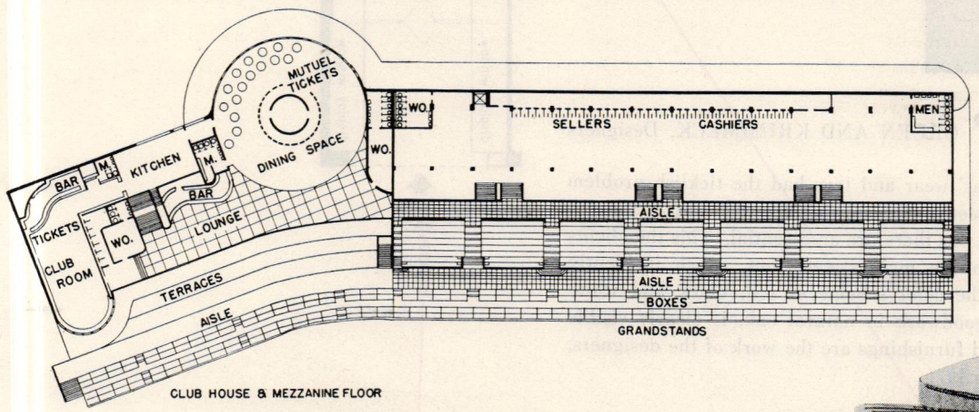
WOLFF & PHILLIPS, Architects

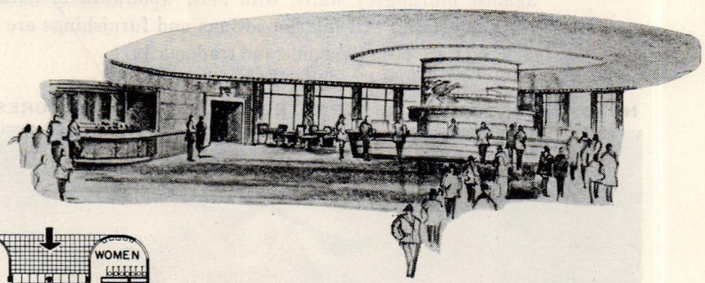


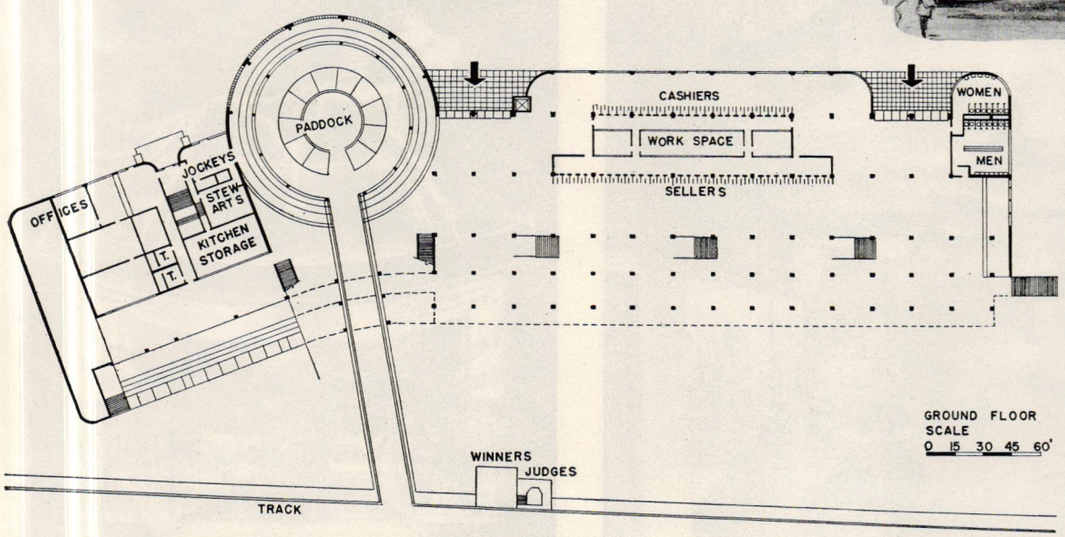
This race track design, a comparative novelty among current architectural projects, is planned for a site eleven miles outside Portland, Ore. It consists of a one-mile track, grand stand, clubhouse, stables for 600 horses and parking space for some 10,000 cars. Grandstand, paddock and club house are combined under one roof. Construction will be of steel and concrete. The club house section has an open air terrace and boxes adjoining the public rooms on the mezzanine level. A smaller club room and bar at the left hand corner of the plan is for the use of sponsors. Both this room and the large circular dining space are equipped with ticket booths for the convenience of the guests. The grandstand has a seating capacity of 4,500 plus another 1,500 seats in the club house area. Standing and promenade space for an additional 12,000 persons is provided on the grounds. Adjacent stables, covering an area of eighteen acres, will have fireproof concrete block construction and metal roofs.



HIGH RIBBON WINDOWS ON TWO LEVELS ILLUMINATE TICKET AND CASHIER BOOTHS. BAY OF MAIN DINING ROOM OVERLOOKS ENTRANCE



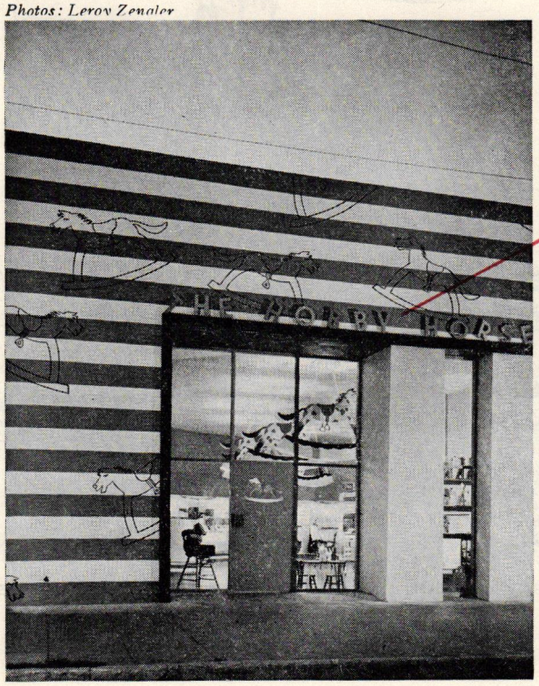


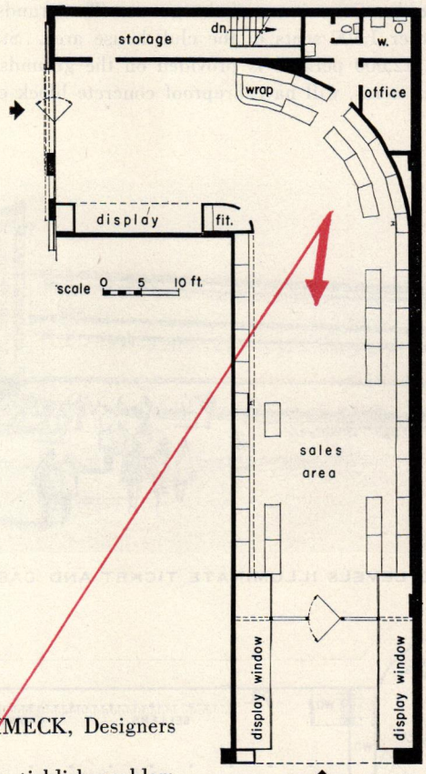


STORES

1. Children's Shop in Long Beach, Calif.
2. Candy Store in New York City.
3. Department Store in Waltham, Mass.
4. Hosiery Shop in New York City.
5. Jewelry Store in New York City.

Photos: Leroy Zenaler

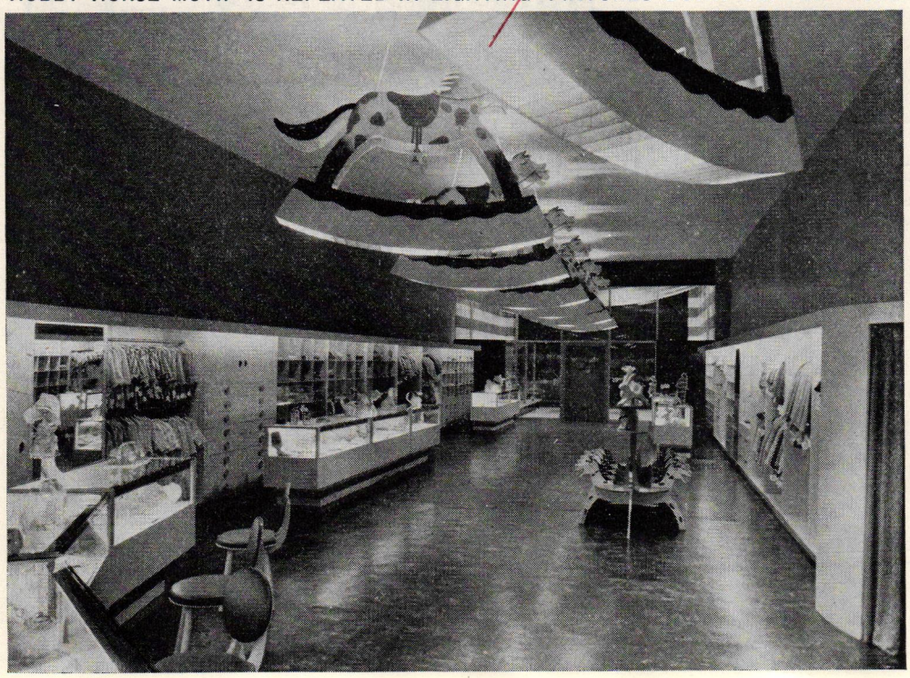




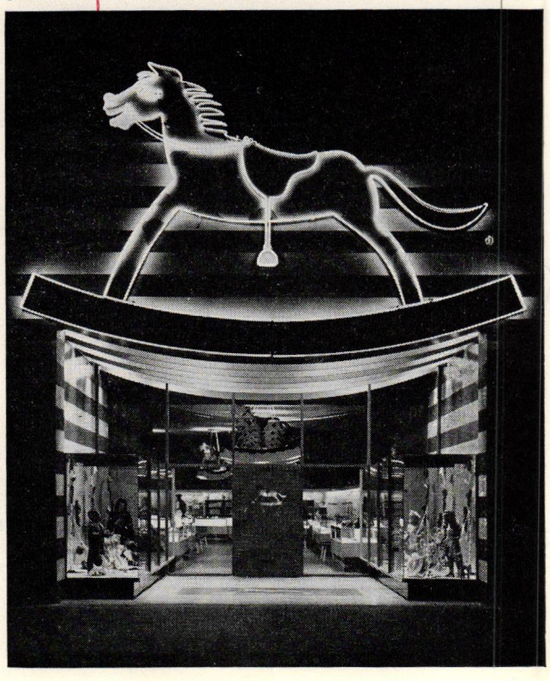
1. HOBBY HORSE SHOP GRUEN AND KRUMMECK, Designers

The designers of this shop for childrens' wear and toys had the ticklish problem of an L-shaped plot fronting on two streets and somewhat out of the main lines of heaviest traffic. An eye-catching facade was therefore an essential. This the clients have in the stylized rocking horse on the main street front, which incidently sets the motif for the whole store. The color scheme of red, black and white against bluish-grey walls, with most woodwork in natural oak, is clearly visible from the street. All interior fittings and furnishings are the work of the designers, as in fact are even the name and trademark.

HOBBY HORSE MOTIF IS REPEATED IN LIGHTING FIXTURES DOWN CENTER AISLE



SHOP FRONT DESIGNED TO ATTRACT CUSTOMERS

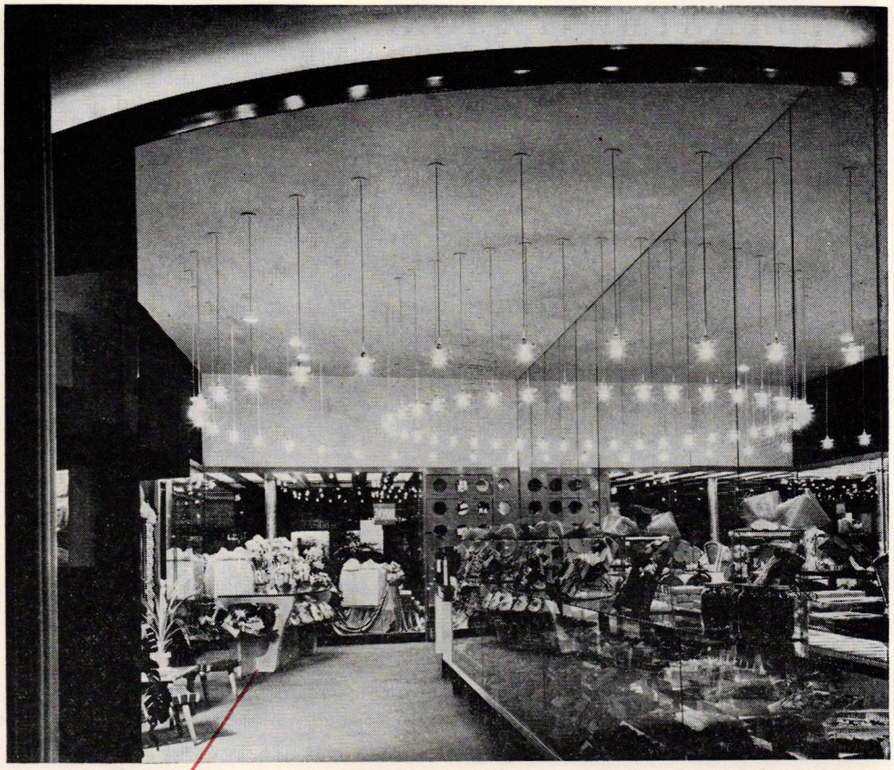


2. BARTON'S BONBONNIERE

GRUEN AND KRUMMECK, Designers

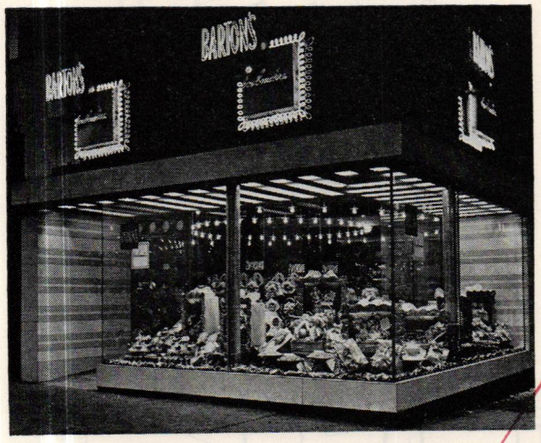
Another in a chain of small, popularly-priced candy stores designed by the same office (FORUM, Sept., '41), this installation pays great attention to lighting. In addition to the by now conventional techniques of strip- and down-lighting, the designers have gone back to tungsten lamps for general illumination. These they have employed to good decorative effect: suspended on small steel tubing, and with only a token shade of clear plastic, the bulbs are set in concentric rings which repeat the sweep of the overhead coves at the back of the shop. Since the fixtures are high, of low wattage and seen against the dark "wovenwood" walls, the effect is very pleasant. Niches for the display of different candies, and a back wall which consists entirely of lighted cubical boxes, provide a large amount of display area.

Photos: Gottscho-Schleisner

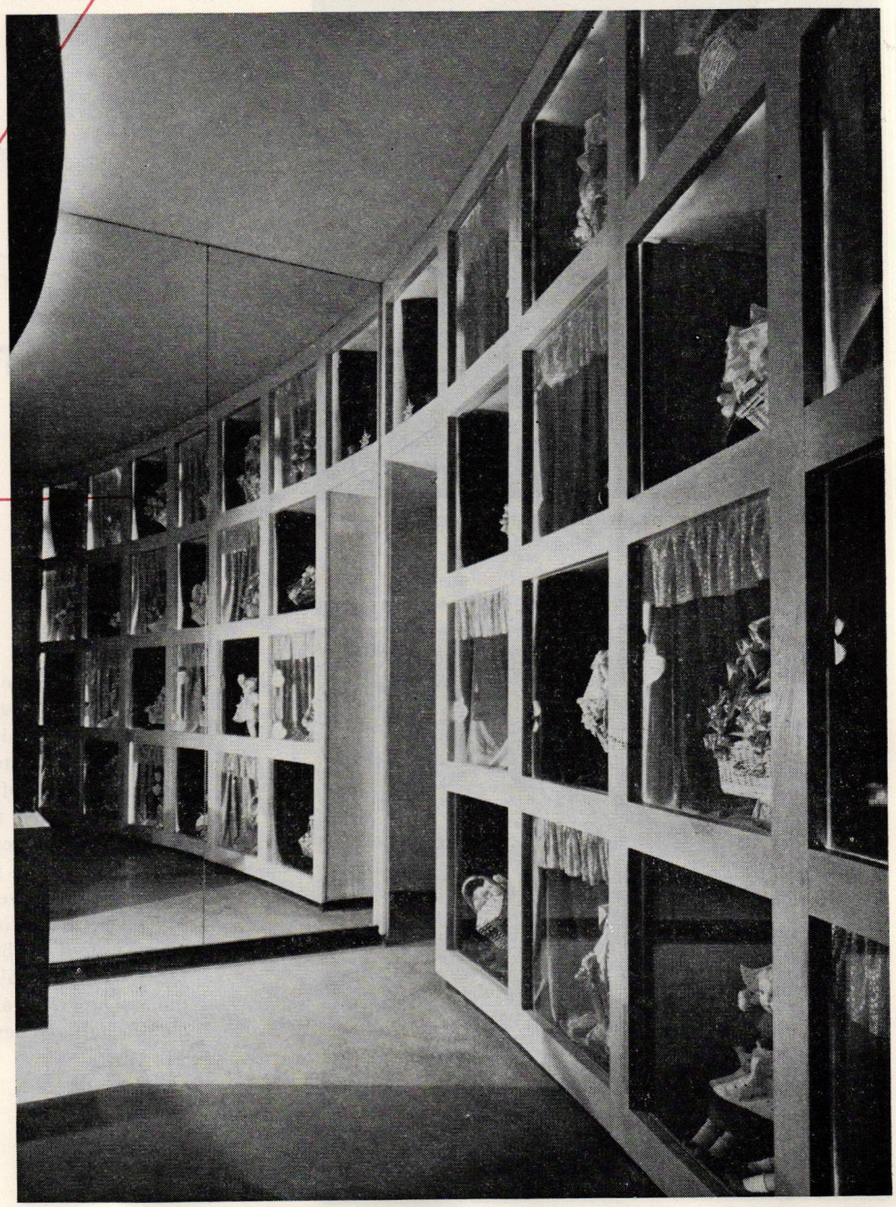


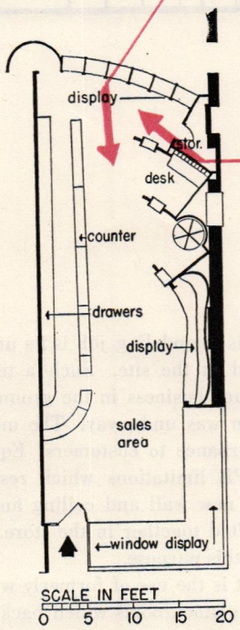
CONCENTRIC RINGS OF SUSPENDED 60-WATT BULBS DRAMATIZE MERCHANDISE

ENTIRE CORNER BECOMES BRIGHTLY LIT BOX



REAR OF SHOP CONSISTS OF SCREEN OF DISPLAY CASES, LIGHTED AT NIGHT



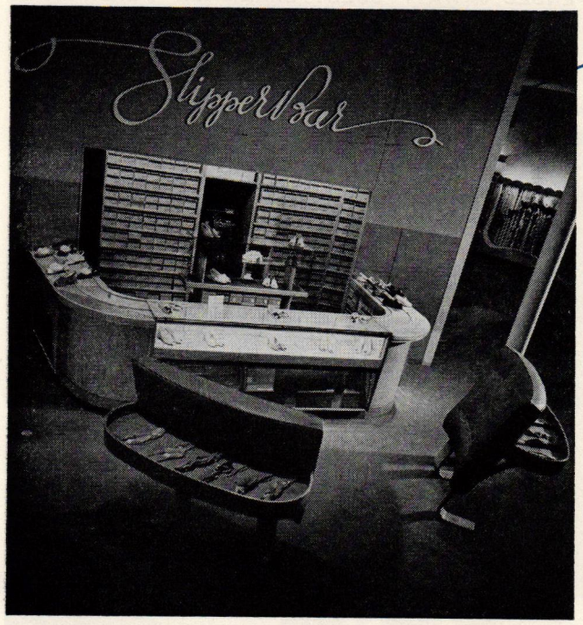


3. DEPARTMENT STORE J. GORDON CARR, Architect

Photos: Ezra Stoller

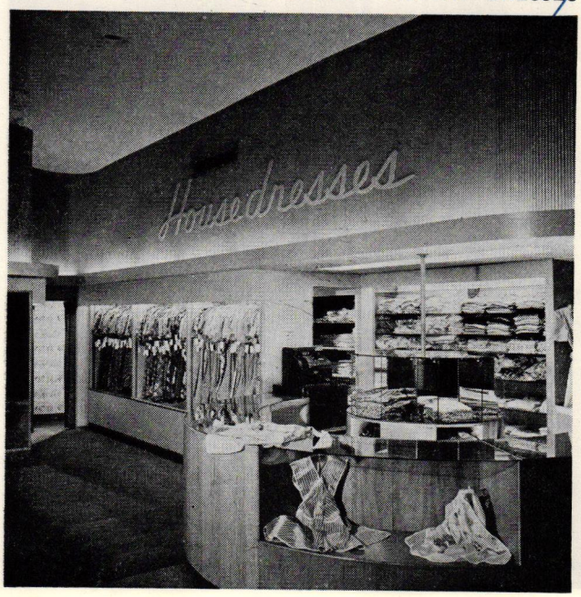


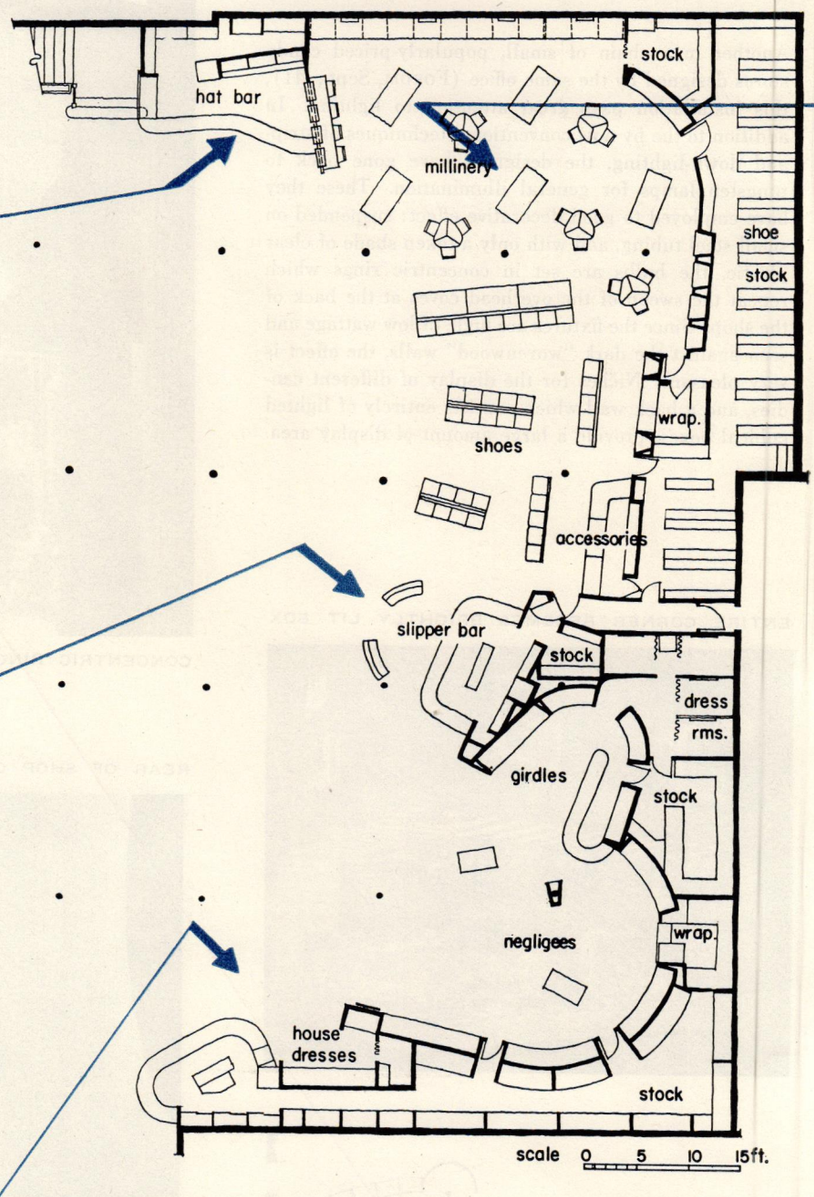
HATBAR REPEATS CURVED SURFACES THROUGHOUT



SLIPPER BAR HAS LEANING STANDS FOR TRY-ONS

SPECIAL RACKS AND COUNTERS DISPLAY DRESSES





The unique feature of this remodeling job is its unit design which employs prefabricated panels assembled at the site. Such a technique was used more out of necessity than choice, since business in the ground floor store could not be interrupted while construction was underway. The unit system permitted remodeling with a minimum of disturbance to customers. Equally important, it was the only practical solution to WPB limitations which restricted new work to "fixtures." Under this classification, new wall and ceiling finishes were permitted only when made as panels to be bolted together in the store. Sheetrock, plywood and woodweave were employed for this purpose.

Of particular interest is the use of formerly waste space for the installation of a sound studio. Above the stockrooms which back the main show windows, was a fairly wide area, 6½ ft. in height. Here, in excellent view of the customers, continuous programs are now given, featuring music, fashion news, style shows, glee club recitals and news.



RECTANGULAR STORE INTERIOR IS BROKEN BY WALL COUNTERS, SEMI PARTITIONS AND A DROPPED CEILING

4. GOTHAM HOSIERY SHOP

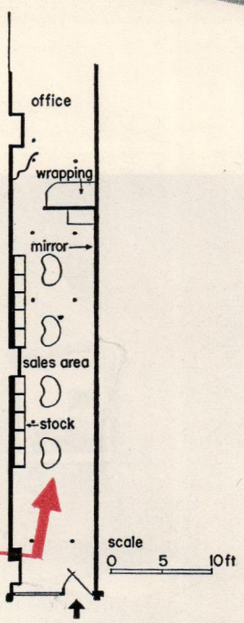
CARSON & LUNDIN, Architects

The problem in this tiny, 8-ft wide shop on New York City's Madison Ave. was to achieve maximum attention from the outside and maximum space—real and apparent—on the interior. Both demands were met in a design which makes a show case of the entire shop. One entire wall is mirrored from the off-white ceiling to the floor, which is carpeted in free-formed areas of deep violet, grey and fuschia. The opposite wall is lined with cases scaled to take the hosiery boxes: these cases are also in fuschia, with the intermediate shelves and inner surfaces in gold. The rear wall is painted a rich yellow-green, with the glass-topped sales tables in the same color. All illumination is indirect.



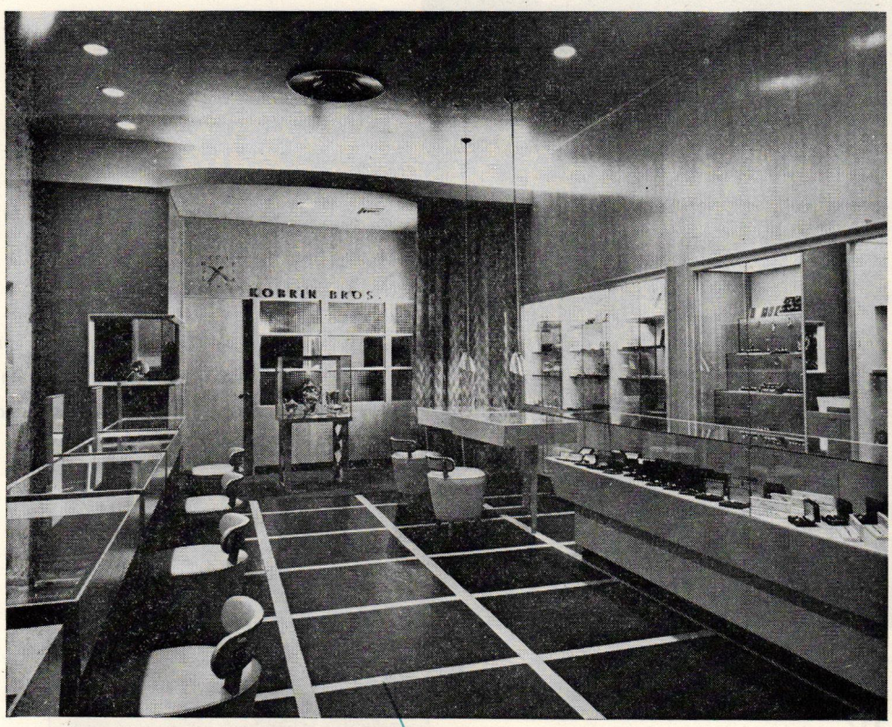
IN AN 8-FT WIDTH, THE ARCHITECTS HAVE CONTRIVED A COMPLETE AND EFFECTIVE SHOP





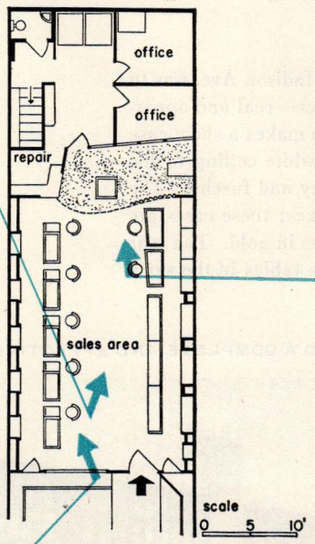
Photos: Gottscho-Schleisner

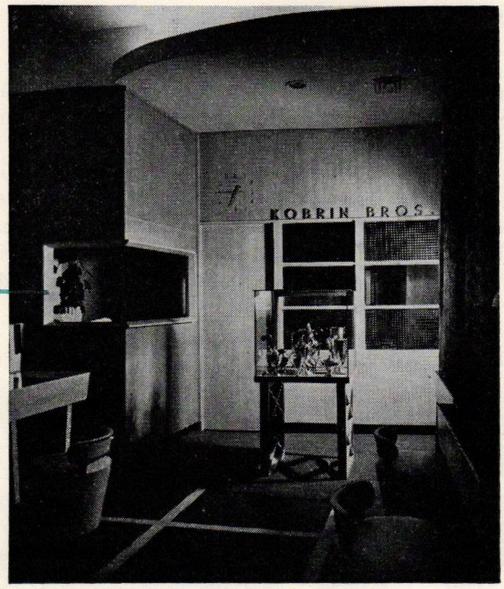
5. JEWELRY SHOP JOSÉ A. FERNANDEZ, Architect



ALL FURNISHINGS ARE ARCHITECT-DESIGNED, LIGHT AND SMALL IN SCALE

In this remodeling job for a Manhattan jeweler, the client's only requirements were that the job be simple, dignified, inexpensive. Only exterior work involved a new sign and painting the existing front. All interior surfaces were redone, however, and new equipment—all of it designed by the architect—installed. The floor of the shop proper is in linoleum, black with white inlays; that of the offices at the rear carpeted in an electric blue. Walls and all furnishings are done in a light pickled oak. The new suspended plaster ceiling is painted a blue-grey. Much of the shop's effectiveness comes from its emphasis lighting —the downlights in the ceiling, conventionally-lighted cases on the right wall of the shop and the brilliantly-lit shadowboxes on the facing wall. The shop is air conditioned, using its own selfcontained unit with heating coils.







OPEN DISPLAY of stock is held to a minimum in line with current merchandising trends. Instead, selected merchandise is displayed in wall cases surrounded by large, plain wall surfaces.

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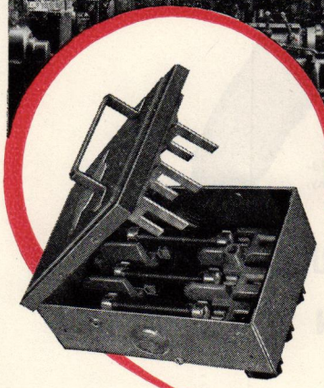
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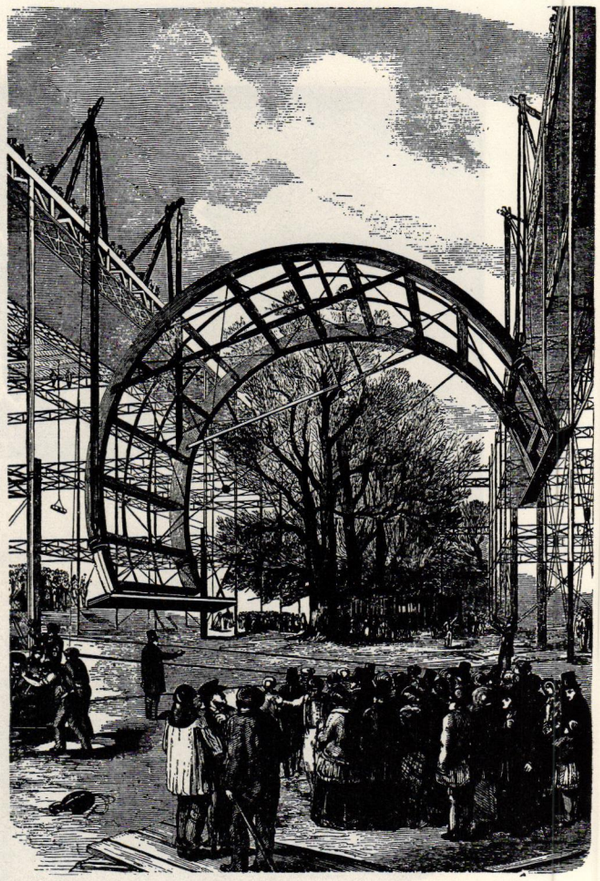
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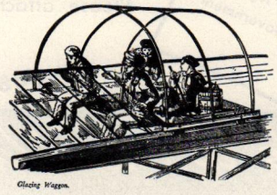
SUPPLEMENT—19th Century Train Sheds



Supporting arches over main aisle of Crystal Palace were of wood, though remainder of structure was entirely of cast iron and glass. Note ancient methods of erection.

CRYSTAL PALACE, LONDON, *1851.* The development of train sheds was paralleled by a remarkable series of exhibition halls in metal and glass. Born of the traditional trade fairs, exhibitions on a national scale had been held in Europe since the 18th century. By 1850, the need of the new Iron Age to step back from its quickening tempo and briefly view its progress on an international basis became dominant. Under the leadership of Prince Albert, the first of these international exhibitions was arranged for London in 1851. A competition for the design of the main building was won by William Paxton, a landscape gardener, who proposed a tremendous structure of iron and glass, based on structural knowledge already gained in the use of iron in bridges, buildings and train sheds. Inspired by the new demands of a new age, Paxton's design seemed to express the possibilities dormant in industrial civilization, firing the imagination of all who saw it. The interior spans were not great, the chief engineering interest being in the use of standardized prefabricated iron parts to achieve an extremely light frame for supporting roofs and walls composed entirely of glass. The usefulness of such a scheme in the design of train sheds was quickly realized, as indicated by the increase of glass roofing in subsequent stations.

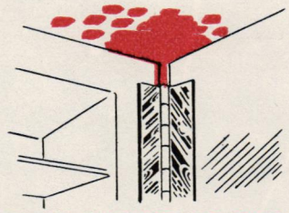
(Continued on page 126)



Crystal Palace was roofed with 4 ft. glass sheets applied in ridge and furrow system of contemporary greenhouses. Moving platform expedited covering area of 8,000 sq. ft.



Who *hid cabinet lighting* for a better "look"?



NO SAG--NO WARP--NO STICK. Miami-Carey was *first* with piano-type hinges and one-piece mirror frames.



ROSETTES "WENT OUT" when Miami-Carey introduced the mirror clip—now standard in the industry.

MIAMI-CAREY did it *first* . . . introduced concealed lighting for more comfortable, better seeing . . . modern appearance. In fact, Miami-Carey was first to introduce bathroom cabinets complete with electric lights.

In addition to looking to Miami-Carey for the "firsts" and finest in design — architects, builders and owners have also come to expect the most in utility and quality. For example: non-rusting steel construction . . . 5-year guaranteed copper-backed mirrors . . . high quality finishes . . . solid brass hinges and mirror frames . . . to mention just a few.

Expect more "firsts" from Miami-Carey when facilities and materials become available. For information on models currently available, write



CONCEALED LIGHTING — another Miami-Carey *first* in beauty and convenience.



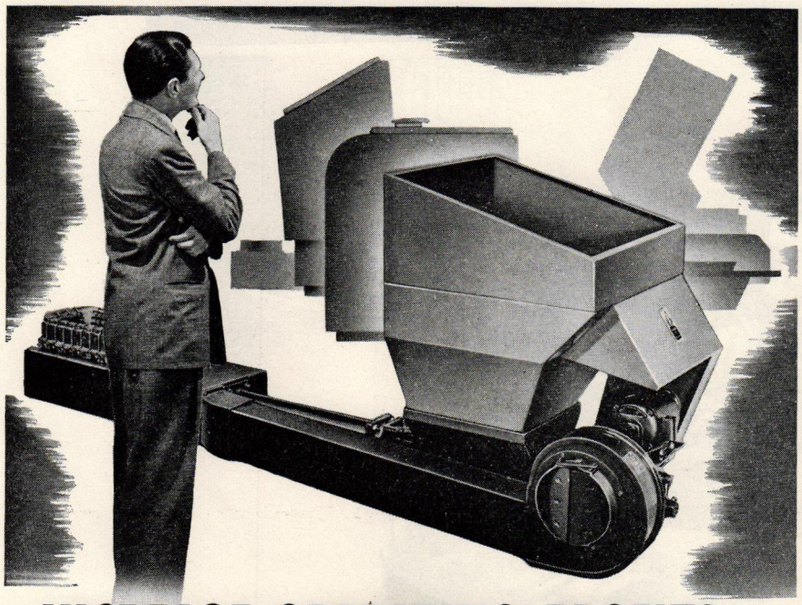
A SAFETY "FIRST"—introduction of the razor blade drop eliminated a major bathroom hazard—enhanced convenience.

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SUPPLEMENT—19th Century Train Sheds



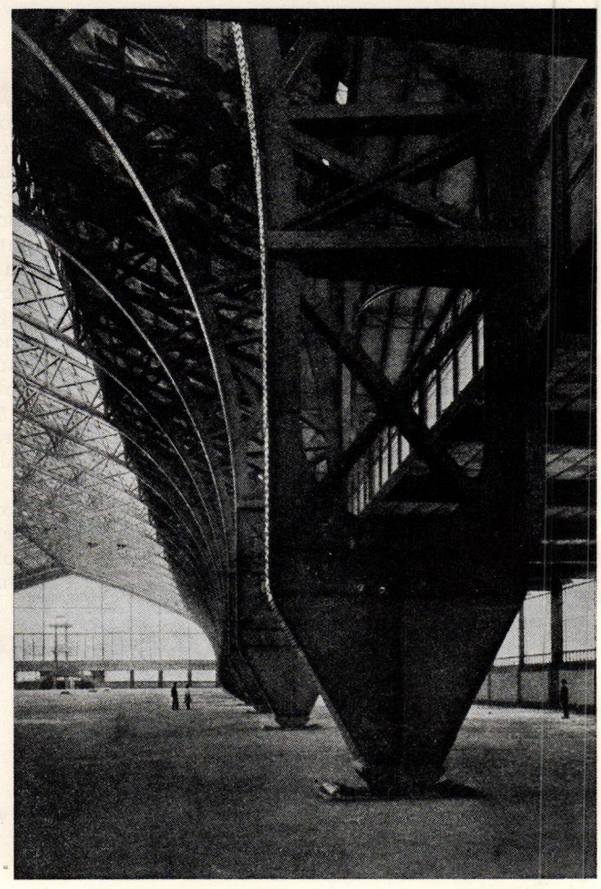
Punching Machine.

Structural parts of many iron buildings were fabricated by new type of machines set up on the site. Here wrought iron bars are being punched for the insertion of bolts.

During the latter half of the 19th century, international exhibitions followed each other in quick succession. France took the lead, with her impressive displays of 1855, 1867, 1878 and 1889. As the expositions grew, separate buildings became necessary, the largest always being devoted to the latest wonders of machinery. These vast halls influenced, and were influenced by, the great train sheds of the day, each contributing its share to advancing engineering knowledge and architectural expression.

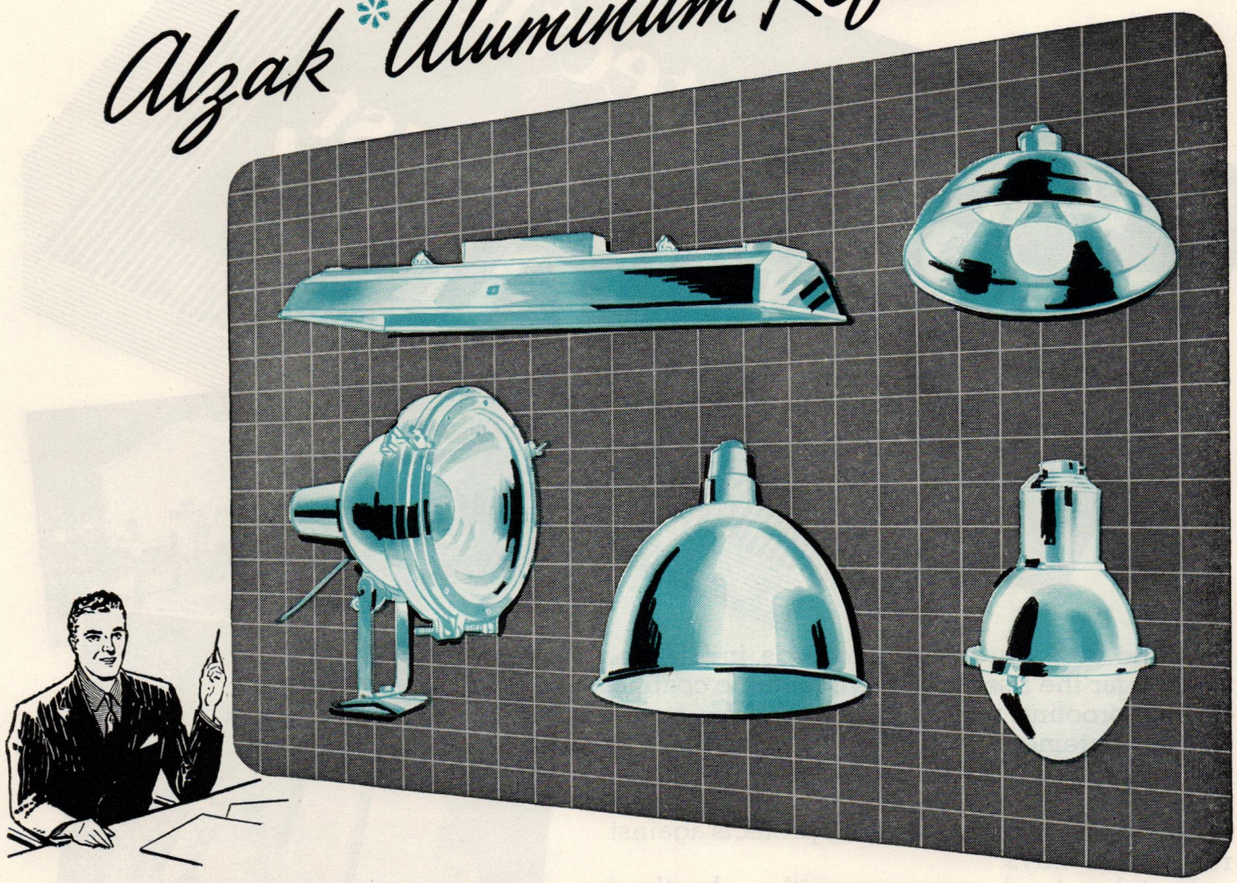
GALLERIE DES MACHINES, PARIS, *1889*. The arched steel girders of the train shed of London's St. Pancras station of 1868 created the greatest single span in Europe until the building of the Gallerie des Machines as part of the Paris exhibition of 1889. The remarkable Paris span of 362 ft. was achieved by hinging the St. Pancras type girder in the center and at both bases, thus establishing an equilibrium of forces hitherto held in check by massive buttressing, tie rods and various expansion joints. This structure climaxed and concluded the development of unencumbered interiors of metal and glass in the 19th century.

Magnificent steel girders of Gallerie des Machines, hinged at center and base, created widest span of day. However, critics complained "the eye is not reassured," finding the omission of columns and the openness of arches too radical.



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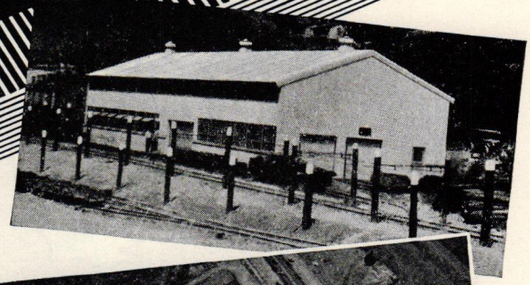
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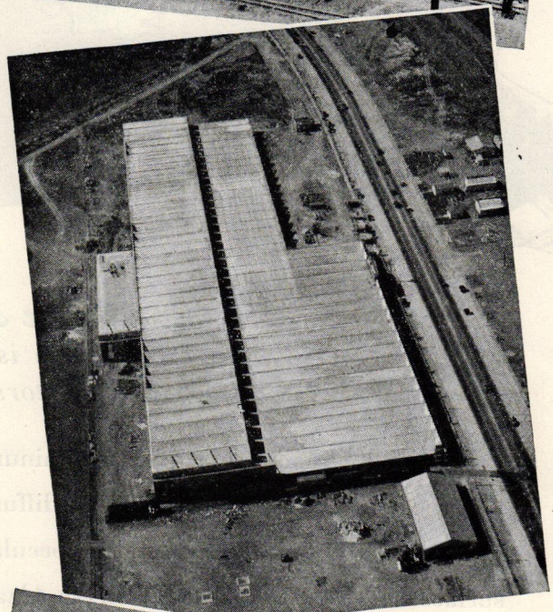
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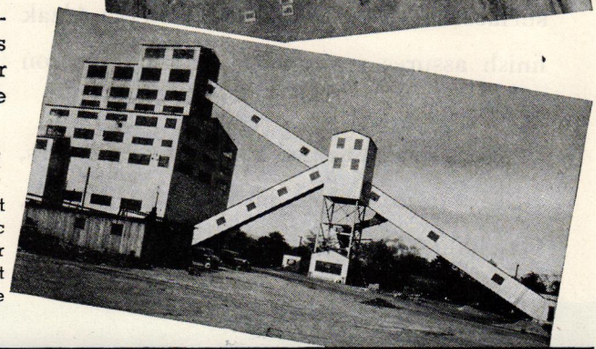
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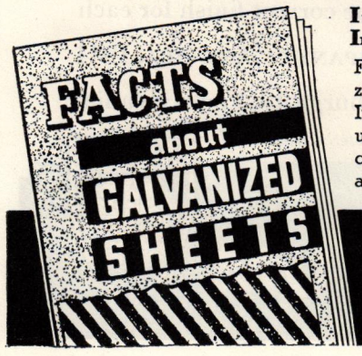
Second, by electro-chemical action, or "sacrificial corrosion"



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Interesting and Valuable Information About ZINC

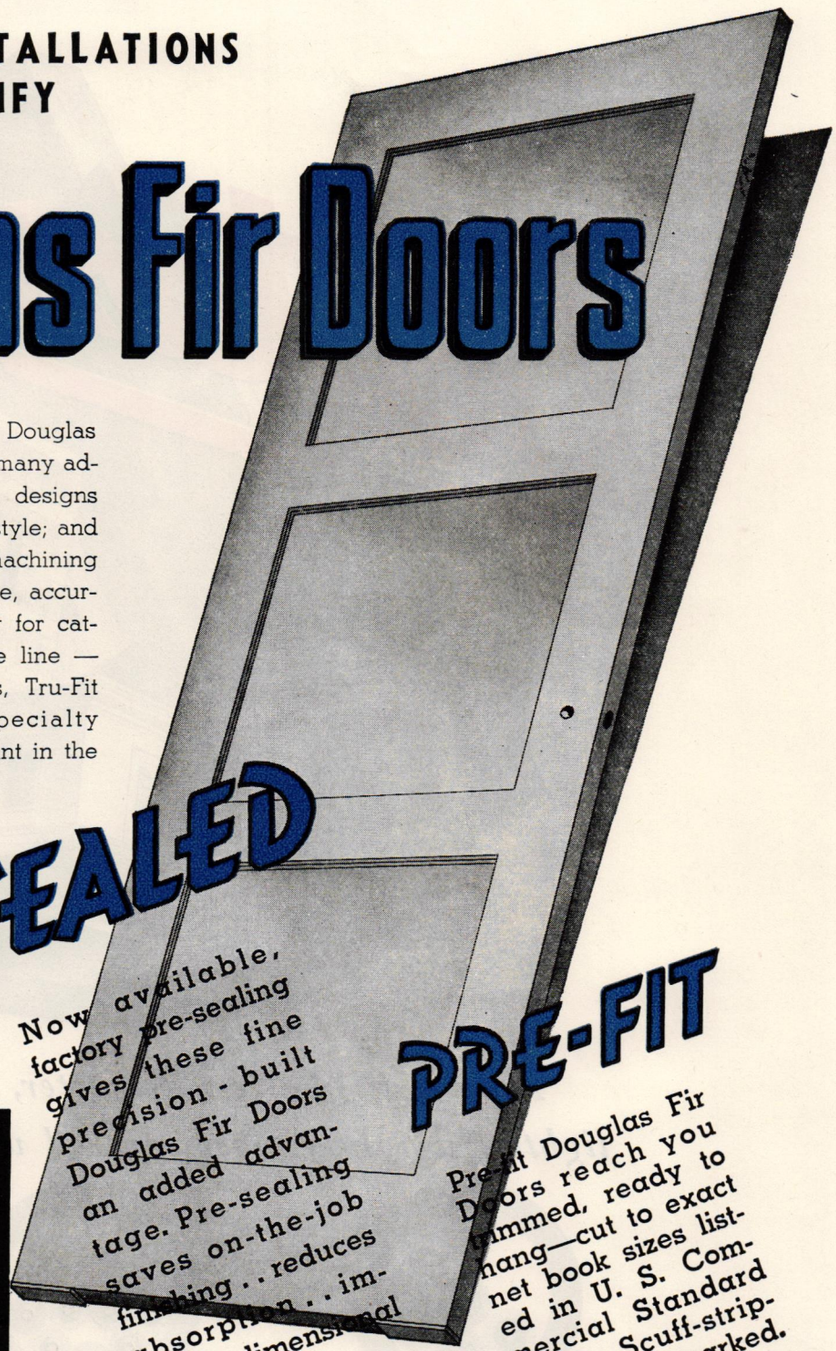
For practical information about zinc, read the booklets the Zinc Institute has prepared for your use. You can get them without charge by sending us your name and address: a postal will do.

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Douglas Fir DOORS

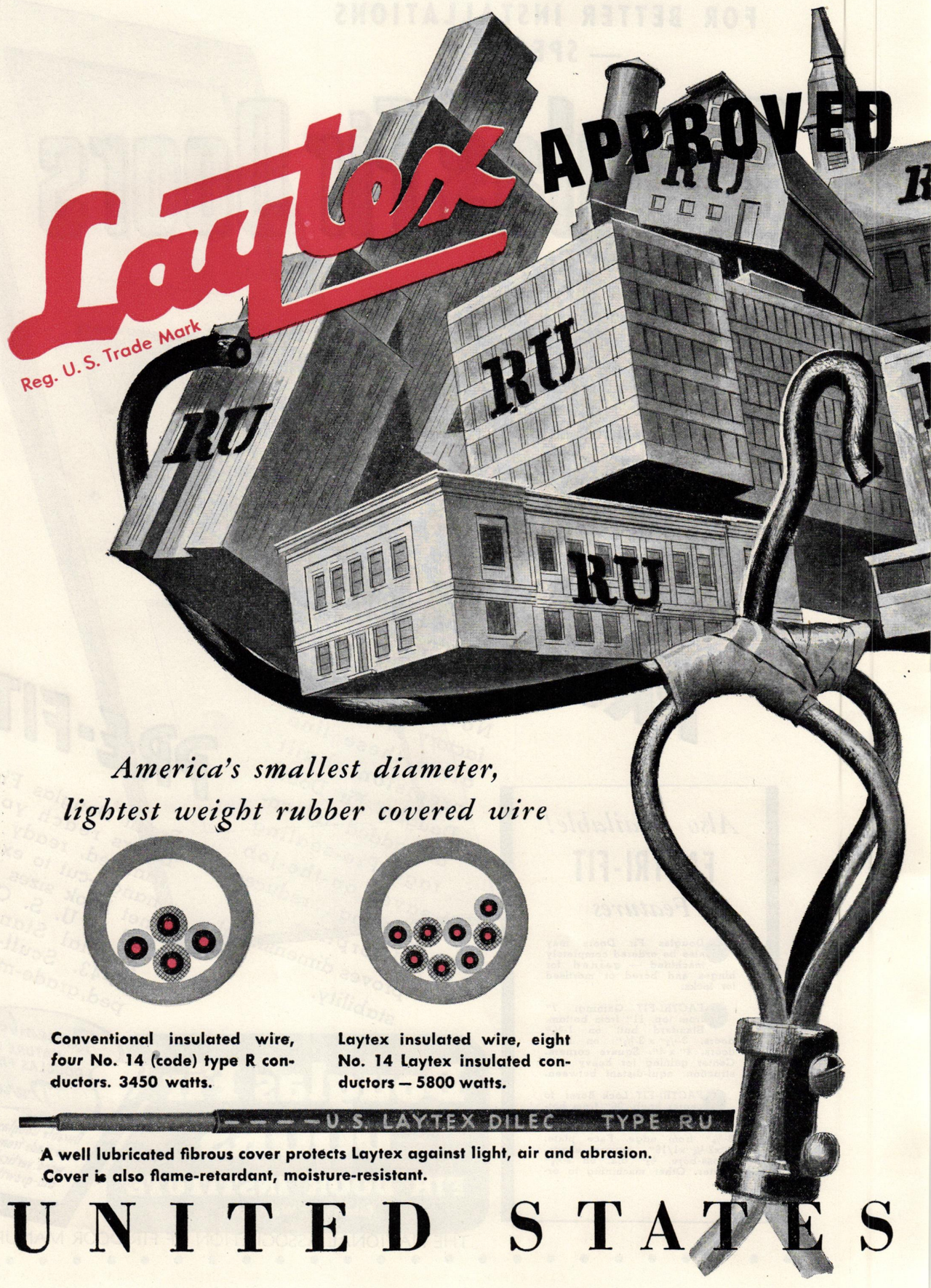
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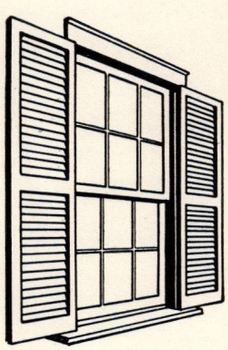
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It is for this reason that the sixth step in the NDMA program consists of educational effort in the public interest . . . consistent effort which spreads knowledge of the scientific research, the careful testing symbolized by the NDMA seal of approval.



The NDMA Seal of Approval—available by license to all manufacturers and distributors who conform to the toxic preservative standards of the NDMA—represents these six steps of protection:

1. *An efficient test for measuring effectiveness of toxic preservatives*
2. *Minimum standards governing the toxic preservative treating of woodwork products*
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4. *Mill inspection of treating equipment and practices*
5. *Laboratory check-tests of preservative solutions*
6. *Educational effort in the public interest*

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THE CALIFORNIA STATE BOARD of Architectural Examiners have announced some changes in the regulations covering the qualifications of candidates for the Architect's License. Formerly a minimum of ten years of experience in architect's offices was required for candidates who had not received a college degree. This period of ten years has been reduced to six. Those who have received a degree from an accredited school of architecture are now required to have had at least two years' experience in an architect's office, one year of which must be subsequent to graduation. Instead of the required six years' experience, one, two or three years' training in an accredited architectural school may, at the discretion of the Board, be considered equivalent to one, two or three years in architects' offices. The examination of education and experience on the part of foreign architects who have come to California to practice has been somewhat simplified by placing them in the same category as that of architects from other states of the union. They will be required to submit exhibits to the National Architectural Accrediting Board.

THE GEORGIA SCHOOL OF TECHNOLOGY, Atlanta, Georgia, is expanding its Division of Graduate Studies, starting with the opening of the spring term on March 4, 1946. In connection with this plan, the Division is offering a series of graduate awards up to $1,800 per academic year, in engineering and allied sciences to qualified graduates of Georgia Tech and other colleges and universities in the United States. In general, the awards will consist of research fellowships, graduate fellowships and part-time instructorships. The fields of study and research open to recipients will include aeronautical, architectural, ceramic, chemical, civil, electrical, general, industrial, mechanical, public health, safety and textile engineering: architecture; chemistry; engineering mathematics; industrial management; and physics.

E. B. VAN KEUREN, architects and engineers, announce that Charles F. Davis, Jr., has been taken into partnership under the firm name of E. B. Van Keuren & Charles F. Davis, Jr., Martin Bld'g., Birmingham, Ala.

FAULKNER and KINGSBURY, architects, announce the following admissions to membership; Mr. John Warren Stenhouse as partner and Mr. Ben Hopson Dyer as associate under the new firm name of Faulkner, Kingsbury and Stenhouse at the former address, 917 Fifteenth St., N. W., Washington 5, D. C.

THE MAJESTIC FLASHING CO., Div. of the Fingles Co., Baltimore, Md., announces the acquisition of patents and trademarks covering Cheney 3-Way Thru-Wall Flashing. The Majestic Co. will continue production of 3-Way Thru-Wall Flashing.

TECHNICAL PLANNING ASSOCIATES, INC., announce their organization with offices at 30 Whitney Ave., New Haven, Conn., and offer a completely integrated and coordinated professional consulting service concerned with the problems of general planning. The services of Technical Planning Associates, Inc., cover only the field of general planning. The Corporation will not engage in the practice of architecture, land architecture or engineering, which are practiced by its individual members. The individual members are Henry W. Buck, industrial and sanitary engineer; Thomas H. Desmond, land architect and engineer; M. H. Lincoln, architect; George C. Conway, attorney; Peter P. Hale, city planner; Lawrence Moore, architect and Douglas Orr, architect.

MARJORIE HECHT, until recently layout designer of flying boats and helicopters for Sikorsky Aircraft, has rejoined Robert Heller Associates, Inc., 2 West 46th St., industrial designers, as interior design color specialist and assistant to Mr. Heller. A member of the Heller firm for six years before the war, Miss Hecht became, in 1941, a designer in the aircraft industry and has been accorded full membership in the Institute of Aeronautical Sciences. During her earlier association with Mr. Heller, she specialized in interior design of retail stores modernized by the organization.

THE NATIONAL PUBLIC HOUSING CONFERENCE, INC., at 1015 Fifteenth St., N. W., Washington 5, D. C., has scheduled its annual meeting to be held in New York, at the Hotel New Yorker, on March 14, 15 and 16.

WALTER DORWIN TEAGUE, industrial designer, 444 Madison Avenue, New York, and Title Guarantee Building, Los Angeles, announces that Marc Thompson, architect, formerly Chief of Building Design Civil Aeronautics Administration, has joined his organization and is prepared to advise on the design of airport terminal facilities in all their details or to act as consultant to communities and others planning airports. In establishing his west coast office, Mr. Teague has formed an additional partnership including Eugene W. Gerbereux, James Roper Scales and Charles M. Richards, Jr.

(Continued on page 134)

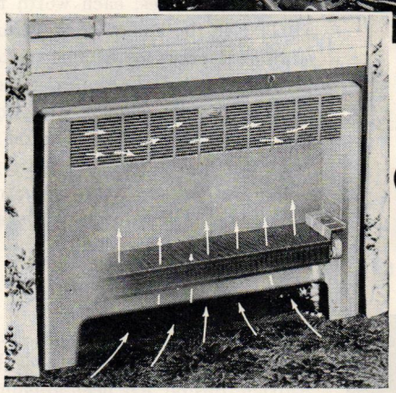
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J. Binford Walford announces that Mr. O. Pendleton Wright will be associated as a co-partner in the general practice of architecture. The firm name will be J. Binford Walford and O. Pendleton Wright, architects, at 103 E. Cary St., Richmond, Va.

Louis E. McAllister and Douglas G. Braik announce an association for the practice of architecture with offices in the Bulletin Building, Philadelphia 7, Pa.

Assen Jordanoff, president of Jordanoff Corporation has announced that the visual education techniques which proved so successful in training members of the armed forces during the war, are now available to many different types of business and industry. The Jordanoff Corporation, formerly connected only with the aviation industry, plans to extend its activities into every phase of manufacturing, maintenance and service. The methods involve extensive use of drawings and photographs which give the student an instantaneous view of the subject and its component parts.

COMPETITION

Glamour magazine, in conjunction with a group of more than 30 manufacturers of home furnishings and equipment, is sponsoring a contest for working girls designed to help solve an acute country-wide housing shortage. The contest's objective is to demonstrate that many existing homes can be remodeled to include a second separate housing unit. Girls with a job living in houses with their parents or relatives are invited to submit plans for such an apartment within their homes. The unit must be contained within the outer construction of the house—no wing or ell may be added. It may be either a two or three room apartment with a bathroom and kitchenette. Prizes for the two winning plans will be the construction, equiping and furnishing of these living suites, each worth more than $10,000, in the homes of the winners. Ten additional prizes of $100 in victory bonds will be awarded. For rules of the competition, write to *Glamour*, The Conde Nast Publications Inc., 420 Lexington Ave., New York 17, N. Y. Entries will be judged by a panel of housing and decorating experts and editors. The winners will be announced approximately April 1, 1946.

APPOINTMENTS

William Truman Aldrich, F.A.I.A., of Brookline, Mass., formerly of Bellows & Aldrich, Boston, has been appointed by the President of the United States to serve on the National Commission of Fine Arts, succeeding the late John A. Holabird of Chicago. L. Andrew Reinhard, of Reinhard & Hofmeister, New York has been appointed to the Commission by the President to succeed William F. Lamb, whose four-year term of service has expired.

Arthur F. Deam has been appointed professor and chairman of design for the current year in the School of Fine Arts, University of Pennsylvania. He comes from the University of Illinois where he served as head of the department of Architectural Design. Previously he had been senior critic at the Armour Institute of Technology while carrying on a private practice in Chicago.

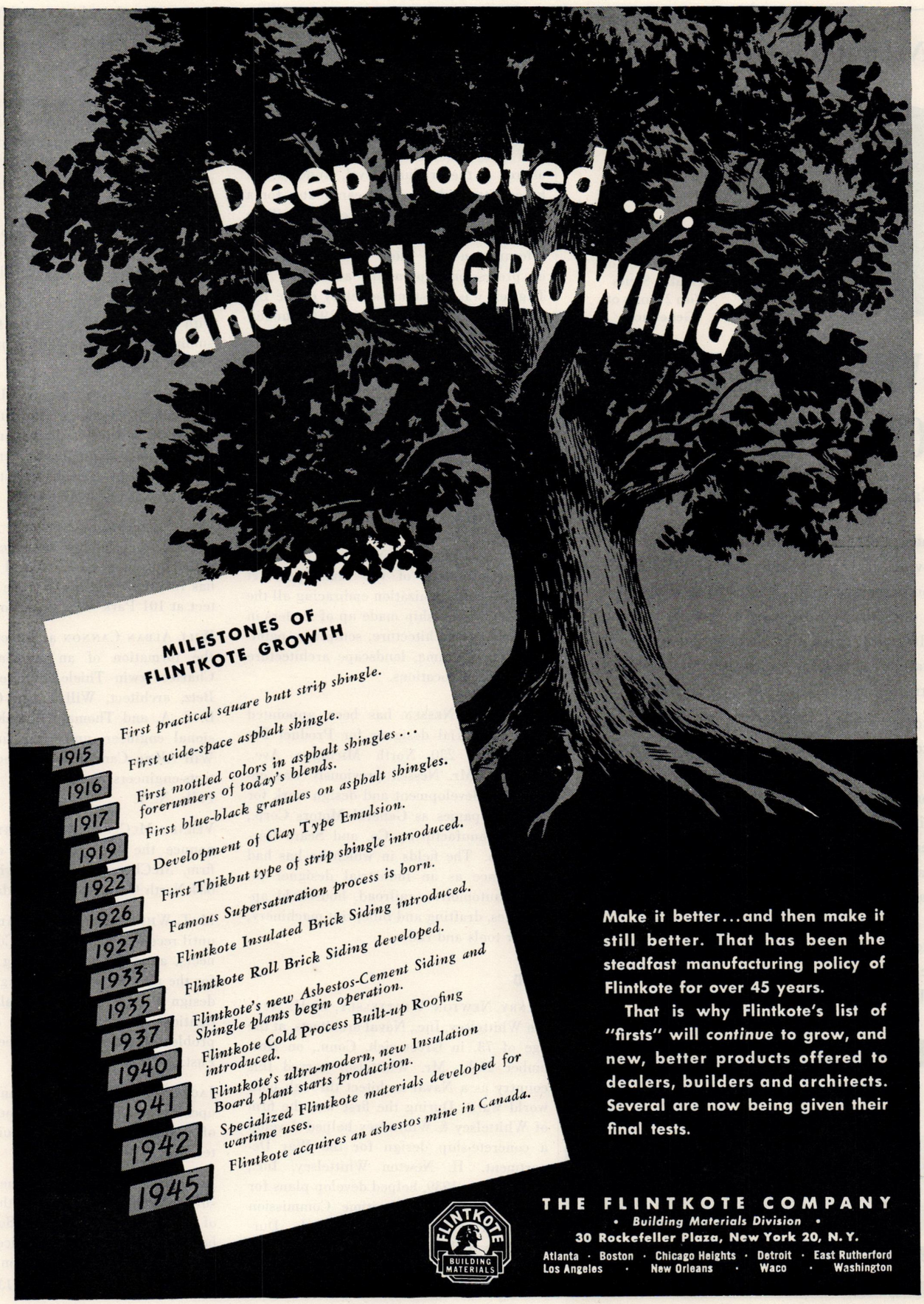
The Austin Co., engineers and builders, Cleveland, Ohio, announce the appointment of three new vice presidents: Charles W. Payne, Jr., Harold A. Anderson, and Richard Ellis.

Major F. B. Peckhem has been appointed as the United States Plywood Corporation's architectural representative. Major Peckhem, just relieved from active duty in the Army Air Forces, is also a veteran of World War I. His new duties will be to provide information and advice on plywood and its uses—both technical and general—to architects, builders and designers.

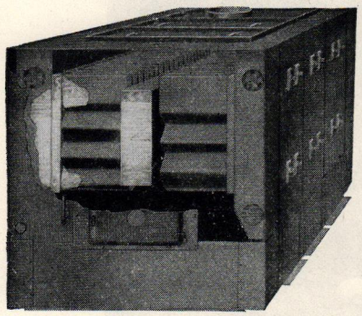
Commander John K. Hyatt, former vice-president and director of the Guided Radio Corporation of New York City, has been appointed Project Director for Raymond Loewy Associates. Commander Hyatt was previously associated with Raymond Loewy, working on a special wartime building project.

Rexford Guy Tugwell, governor of Puerto Rico, has been appointed professor of political science at the University of Chicago, effective July 1, 1946. Mr. Tugwell will teach in the political science department of the university, as well as direct a new program of education and research in planning. This program, which opens January 1, will be conducted in cooperation with the Chicago chapter of the AIA, the Public Administration Clearing House, and agencies affiliated with it, such as the American Society of Planning Officials, the International City Managers' Association, the American Municipal Association and the National Association of Housing officials. Organization of the program is a development of the research which the division of the social sciences has carried out during the last 25 years on urban and regional problems and trends. Many of the faculty of the division have

(Continued on page 136)


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engaged actively in such planning activities as the Chicago Plan Commission, the Illinois Postwar Planning Commission and the National Resources Planning Board. Recently the university has supplemented its studies of urbanism with a comprehensive program of research on agriculture and rural life. Though the work will be offered at the graduate level, students will be admitted who are not candidates for a graduate degree. Refresher courses will be offered in the field of planning to returning veterans and to those already engaged in professional planning activities. Mr. Tugwell was assistant secretary of the Department of Agriculture in 1933, undersecretary from 1934-37; chairman of the planning department, New York City Planning Commission, 1938; Chancellor of the University of Puerto Rico, 1941 and later that year was appointed governor of the island. Several of the books he has written are *Economic Basis of Public Interest, American Economic Life, Industry's Coming of Age, Battle for Democracy,* and *Changing the Colonial Climate.*

CHARLES C. PLATT, of New York, has been elected president of the Municipal Art Society—an organization embracing all the arts, its membership made up of leaders in the fields of architecture, sculpture, painting, music, drama, landscape architecture and kindred vocations.

WALTER F. NESSEN has been appointed chief industrial designer for Product Designers of 230 North Michigan Ave., Chicago. Mr. Nessen previously was engaged in development and design work for such companies as General Motors Corp., Budd Manufacturing Co. and Sears Roebuck Co. The fields in which he has had experience as an industrial designer include automotive, railroad, household appliances, drafting and blueprint machinery, power tools and radios.

DIED

HENRY NEWTON WHITTELSEY, of H. Newton Whittelsey, Inc., Naval architects, at the age of 73, in Greenwich, Conn., on November 26th. Mr. Whittelsey served this country as a Naval architect through both world wars. During the first war the firm of Whittelsey & Whittelsey helped develop a concrete-ship design for the War Department. H. Newton Whittelsey, Inc., organized in 1939, helped develop plans for the United States Maritime Commission C-1A and modified C-2 type vessels. During the war the office worked on plans for Navy auxiliary vessels and Army ships. Mr. Whittelsey was a member of the Society of Naval Architects and Marine Engineers.

NEW OFFICES

ALAN DAILEY, JOHN W. BRIGGS and ROLAND A. YAEGER have become associated for the practice of architecture and will be known as Dailey, Briggs & Yaeger, with offices in the Hiram Sibley Building, 311 Alexander St., Rochester 7, N. Y.

R. S. MCCOOK and C. E. BOLTON, architects, announce the formation of a partnership. Their address is Lake Charles, La.

THEO BALLOU WHITE, architect, recently with the US Army Engineer Corps, is resuming practice at 315 South 15th St., Wayne, Pa.

ROBERT S. LONEY, Major AUS, has just received his discharge after three and one-half years in service. He is opening an office at 2518 North Columbus St., Arlington, Va., for general practice in architecture, with emphasis on residential work.

LT. COMMANDER ELDREDGE SNYDER announces that he has been released from active duty in the U. S. Naval Reserve and has re-established his practice as an architect at 101 Park Ave., New York, N. Y.

WILL ALBAN CANNON architect, announces the formation of an associateship with Charles Irwin Thiele, architect, Anthony Betz, architect, Will Alban Cannon, Jr., B. S. A. and Thomas H. McKaig, professional engineer, under the firm name of Will Alban Cannon and Associates, architects-engineers at 2637 Main St., Niagara Falls, N. Y.

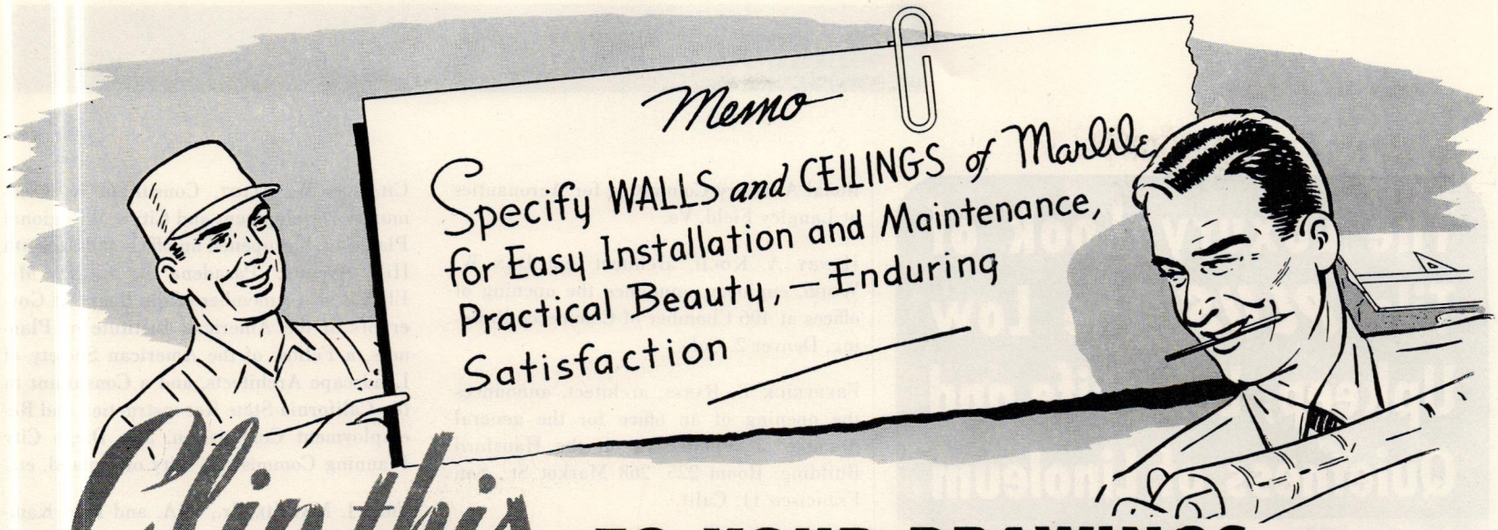
VERNER MCCLURG and HENRY HESSE announce the opening of the architectural firm, McClurg and Hesse, with offices at 634 North Central Ave., Glendale 3, Calif.

M. T. WHITEMORE, Member Am. Soc. C. E., until recently Lt. Col. in the Corps of Engineers, announces the opening of an office for the practice of engineering (to include design of structures, appraisals and investigations, and consultations on building problems) at 1000 Peachtree St., North East, Atlanta, Ga.

JACK SWERMAN, architect, announces the opening of offices for the general practice of architecture in the Wolf Building, Chester, Pa.

BENJAMIN S. SHEINWALD, general and consulting architect, announces the reopening of his office at 85 South St., Boston, Mass., having terminated his services with the Building Construction Section of the Na-

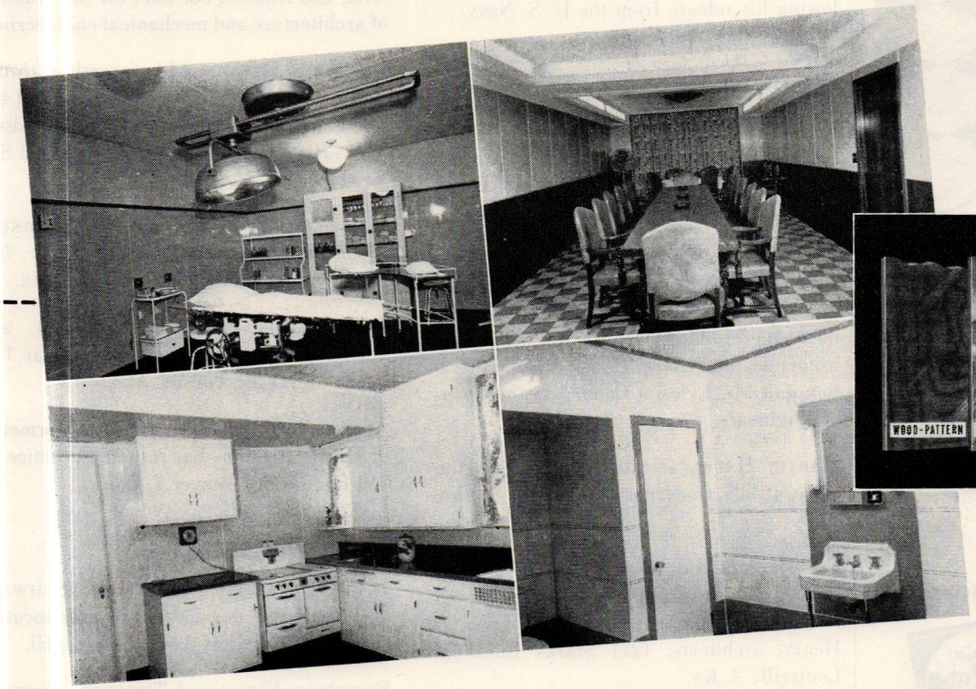
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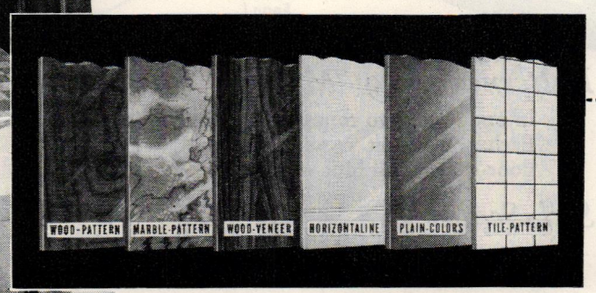
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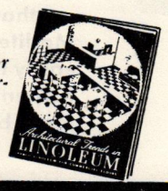
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tional Advisory Committee for Aeronautics at Langley Field, Va.

HENRY A. KOCH, architect and DAN W. WOOD, engineer, announce the opening of offices at 406 Chamber of Commerce Building, Denver 2, Colo.

FREDERICK B. BARSS, architect, announces the opening of an office for the general practice of architecture at the Hansford Building, Room 225, 268 Market St., San Francisco 11, Calif.

LEO L. FISCHER, architect, has resumed his practice after four and a half years with the U. S. Armed Forces. His office will be at 17 Academy St., Newark 2, N. J., and he will specialize in commercial structures.

MILTON B. WEISSMAN, AIA, architect, wishes to announce that he is now located in his new offices at 164 Montague St., Brooklyn 2, N. Y.

WALTER SANDERS and ARTHUR MALSIN, architects announce the establishment of an office at 465 5th Ave., New York 17, N. Y.

HOWARD KETCHAM has reopened his industrial design, color and product research office at 101 Park Ave., New York 17, following his release from the U. S. Navy.

WORLEY K. WONG, architect, has opened his office at 101 Post St., San Francisco, Calif.

JOSEPH N. BOAZ, AIA, announces the opening of his office at the First National Building, Oklahoma City, Okla.

WILLIAM STORK, JR. and WILLIAM G. LYLES have recently reopened their office at 1302 Main St., Columbia, S. C. Mr. Stork had been chief architect for the South Carolina branch of the Federal Housing Administration and Mr. Lyles, a Colonel in the Corps of Engineers.

MARTIN HAURI, architect, has opened an office at 905 Roderigo Ave., Coral Gables, Fla.

FREDERICK R. LOUIS, and A. READ HENRY, having returned from military service, wish to announce the partnership of Louis & Henry, architects, 1271 Starks Building, Louisville 2, Ky.

HENRY L. BLATNER, architect, has opened an office at 11 North Pearl St., Albany 7, N. Y.

DAVID SHOLDER, architect, announces the opening of offices for the general practice of architecture in Room 418, Heard Building, Phoenix, Ariz.

CHARLES W. ELIOT, Consultant on Community Development and City and Regional Planning, has opened an office at 415 South Hill Avenue, Pasadena 4, Calif. Mr. Eliot is also a member of the Board of Governors of the American Institute of Planners, a Fellow of the American Society of Landscape Architects, and a Consultant to the California State Reconstruction and Reemployment Commission, San Diego City Planning Commission, City of Upland, etc.

FRED J. MACKIE, Jr., AIA, and Karl Kamrath, AIA, for the past three years officers in the Army Engineer Corps, have resumed partnership as MacKie and Kamrath, and are temporarily located at 2500 River Oaks Blvd., Houston, Texas.

AMES, CHILD & GRAVES, architects, announce that John W. Ames, Jr. and Josiah H. Child, both lately of the US Air Corps, have resumed the practice of architecture with offices at 50 Beacon St., Boston, Mass.

T. TRIP RUSSELL, AIA, has reopened his architectural office at 2301 South Miami Ave., Miami 36, Fla.

JOSEPH, FLETCHER & JOSEPH announce the opening of their office at 728 N. Highland Ave., Los Angeles 38, Cal., for the practice of architecture and mechanical engineering.

GORDON S. MARVEL, AIA, recently with the US Army Engineer Corps, has resumed his practice of architecture in the Mid-Hudson area. His office is located at 67 Second St., Newburgh, N. Y.

WILLARD STAINBACK and LOUIE SCRIBNER, architects, have reopened offices at 706 Lyons Court Lane, Charlottesville, Va.

FREDERICK A. EASTMAN, architect, announces the reopening of his office at 171 North Meyer St., Tucson, Ariz.

ALFRED WATTS GRANT, architect, formerly of Fairfield, Conn., has resumed practice at 750 Eudora St., Denver 7, Colo.

CHANGE OF ADDRESS

JAMES EPPENSTEIN and RAYMOND SCHWAB, architects and designers, are now located at 646 N. Michigan Ave., Chicago, Ill.

FREDERICK KIRCH and THEODORE POSTMA have found it necessary to move their Model Shop to 123 East 77th St., New York 21, N. Y. because larger and more suitable quarters were required. Since the formation of their partnership several months ago, they have built and developed models for the Chilean Government, the US Rubber Co., and Raymond Loewy Associates.

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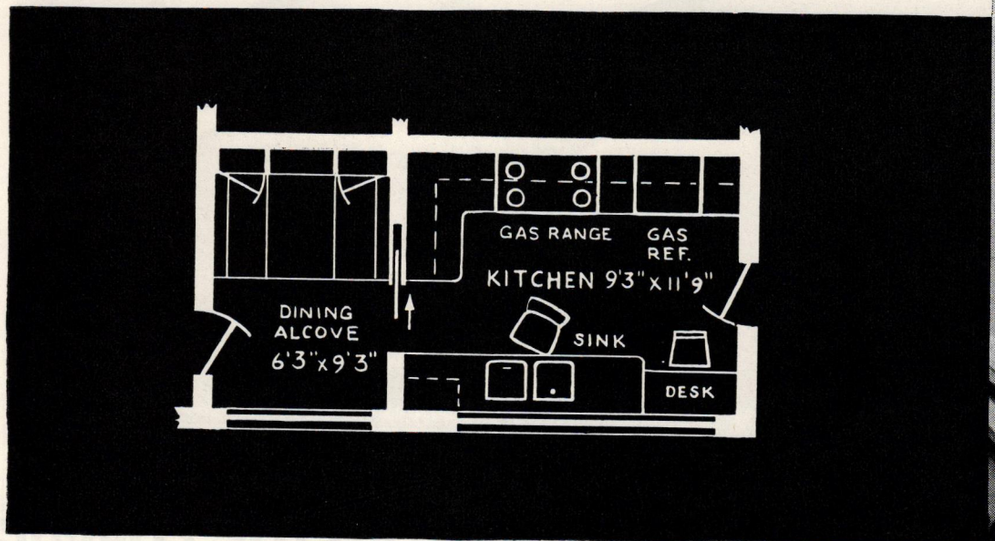
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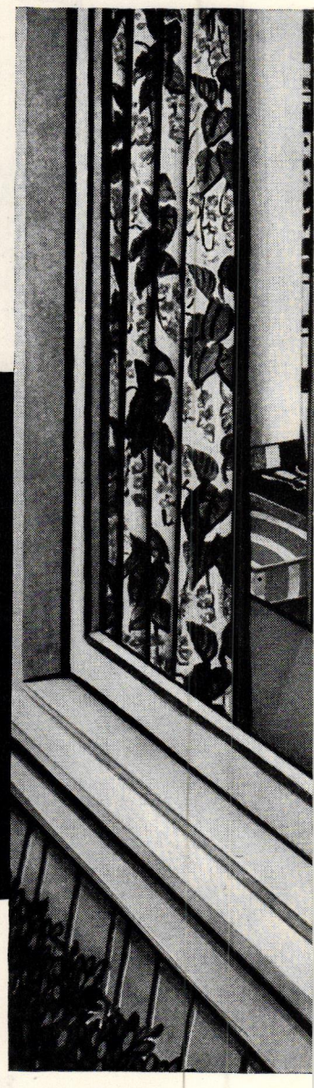
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Why your clients would

This is no case of conjecture or "wishful thinking." We actually tested this "New Freedom Gas Kitchen" in a recent survey. And we found out exactly why this kitchen meets with enthusiastic approval among the very women from whom you draw your clientele.

Here's the story in their own words —





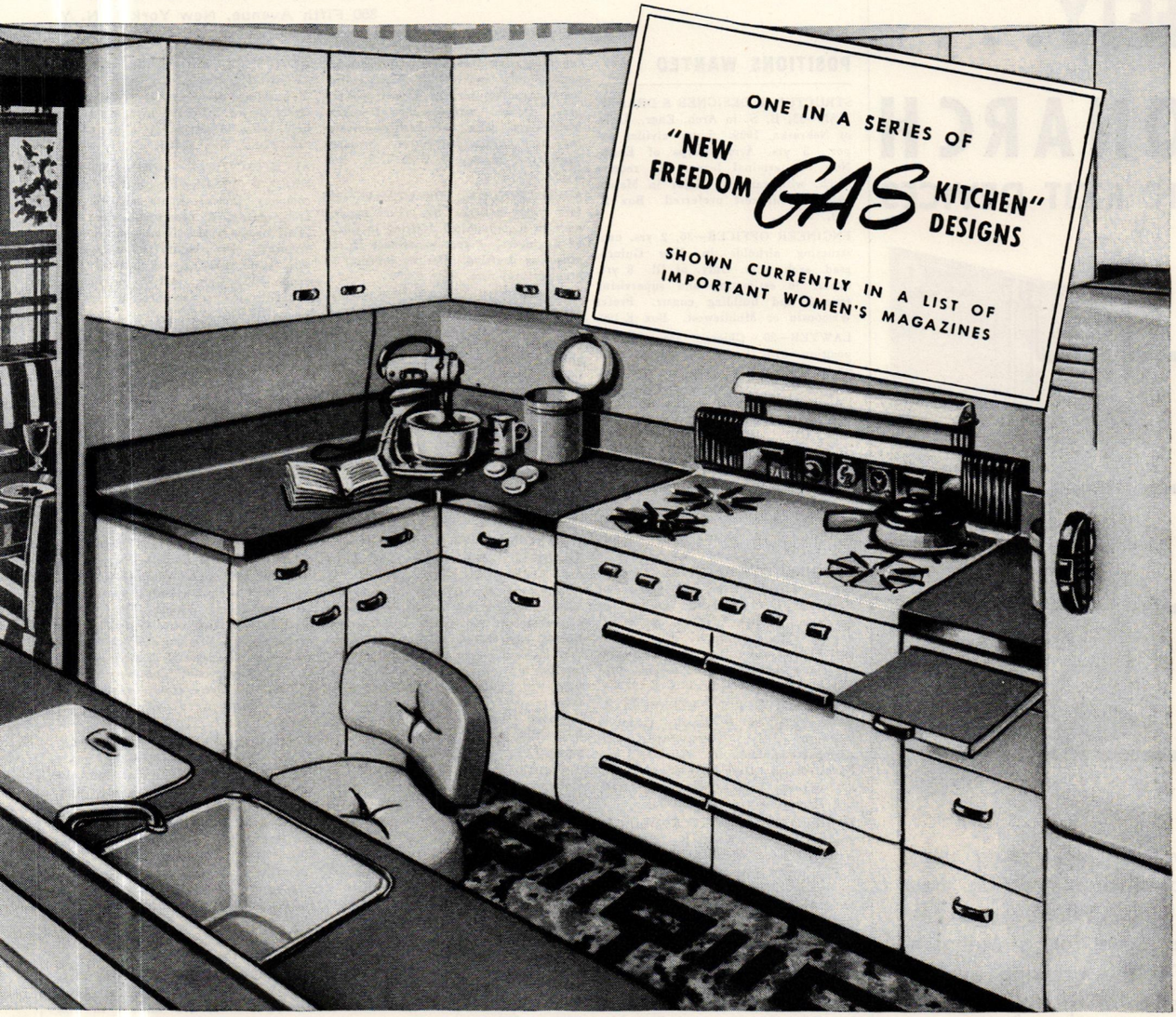
RE THE LAYOUT: "I like the all-in-one arrangement." "It's compact and practical." "Cabinets flush with the floor mean less cleaning." "There's plenty of light and storage space." "The sink directly across from the range saves you steps." "The breakfast room is so gay. Convenient, too."

RE THE DECORATIVE TREATMENT: "The colors are so bright and cheerful." "You won't tire of that color scheme." "It's good for summer or winter." "Looks cool and easy to clean." "I like the glass door — the black frame won't show fingermarks."

RE THE EQUIPMENT: "The new Gas equipment is certainly up to the minute!" "I'm sold on flame-cookery with Gas — it's fastest, cheapest, and easiest to regulate." "My new refrigerator will be run by Gas. It's noiseless — and more dependable." "I prefer Gas for everything. I've always found it completely satisfactory because it gives uninterrupted service."



like a kitchen like this!

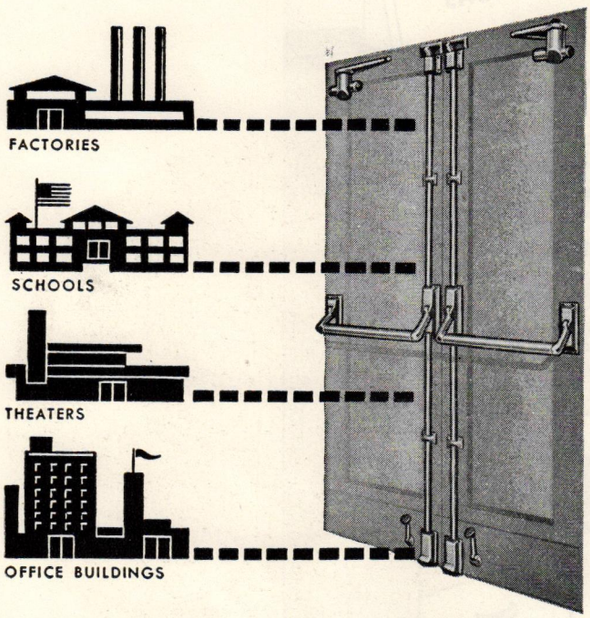




THERE'S NO DOUBT ABOUT IT! Gas is the overwhelming favorite as a kitchen fuel! Over 20,000,000 urban and suburban women are cooking with Gas now — want Gas ranges, Gas refrigerators and water heaters in their easy-to-work-in, *modern* homes. Capitalize on this preference by specifying Gas for every home you build or plan. And remember it pays to recommend Gas for the most effective house heating and air conditioning. See your local Gas Company for complete technical details on modern Gas practice, appliances and systems.

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POSITIONS WANTED

STRUCTURAL DESIGNER & DRAFTSMAN—33, B. S. in Arch. Engr., Univ. of Nebraska, 1939. 5 yrs. civilian exper., 5 yrs. Army Corps of Engrs. Now on terminal leave, will receive disch. with rank of Major in March, 1946. Middlewest preferred. Box E-189.

ENGINEER OFFICER—36, 2 yrs. constructing airfields in New Guinea, grad. arch. engr. Univ. of Ill. 8 yrs. exper. in estimating and supervising general and building constr. Prefer Wisconsin or Middlewest. Box E-190.

LAWYER—30, Chicago area, desires position with builder or real estate office. Executive ability, thorough, capable accepting responsibilities. Released from Army December '45. Sidney Salins, 3617 Leland Avenue, Chicago, Ill.

DRAFTSMAN — ESTIMATOR — SURVEYOR—Marine vet, 38, married, 16 yrs. varied exper. in construction industry. Desires connection with reputable arch. or bldg. constr. office located in or near Philadelphia. Box E-191.

BUILDING CONTRACTOR'S ASST.—Disch. Army Officer, 31, grad. of Rochester Inst. of Tech., constr. supervision. Desires position as assistant to bldg. contractor. Limited exper. (1 yr.) but willing and intelligent, especially interested in housing projects. East preferred. Box E-192.

MANUFACTURER'S REPRESENTATIVE—Plumbing & heating trade in southern Calif. 12 yrs. exper. with national manufacturers. Age 38—3 yrs. Naval service. Have knowledge of market and can provide warehouse facilities if desirable. Box E-194.

LANDSCAPE ARCHITECT—Vet, 35, grad. Univ. of Wis., B. S. (Land Arch.), Masters (Land Arch.) Harvard. 5 yrs. varied experience. Desires permanent position in landscape arch. or some related field. Box E-195.

PIPING DRAFTSMAN—Veteran, 26 yrs. of age, 6 yrs. exper. on marine power plants including field supervising. Past year stationed at Pearl Harbor Navy Yard as a piping draftsman. Anxious to get connected with a heating engineering firm or similar. Live in Westchester County, N.Y. Box E-196.

ARCHITECT—Registered since 1928, 37 yrs. old, white, christian, Lt. Col., Corps of Engineers, 5 yrs. Army service. Desires position or business opportunity in architecture or allied line, somewhere in eastern U. S. Box E-197.

ARCHITECT—INDUSTRIAL DESIGNER—Vet., B. of Arch. Texas A. & M., 1939. 5 yrs. in Army as architect with Hawaiian Air Depot & Headqtrs. Constr. Service. Expert delineator, detailer and draftsman. Box E-198.

ARCHITECT—Member A.I.A., age 37, married. Looking for permanent location in West or Midwest. Degree in Arch.; best qualifications; thoroughly experienced. Can create, design and produce. Box E-199.

ENGINEER—MANAGER—Regis. prof. engineer. 15 yrs. experience in heating and ventilating, air conditioning, sanitary and electrical fields including 5 yrs. private practice consulting, design, and supervision, and 7 yrs. sales engineering and contracting engineering, operating franchise of leading air conditioning and refrigeration equipment manufacturer, in a metropolitan area. Desires management of engineering and sales, purchasing-contracting, for mfgr., distributor, or large contractor. South or West U.S. Box E-193.

ARCHITECTURAL DRAFTSMAN—28, four years college. 3½ years experience in topographical drafting in Corps of Engineers. 1 year experience in engineering drafting. Desires position in architectural firm. Box E-200.

ARCHITECTURAL ENGINEER—War vet, 3 years experience in bldg. construction supervision, 3 yrs. in structural design, 2 yrs. as procurement engineer of industrial equipment and materials, desires technical sales representation in Twin Cities and Northwest. Box E-201.

ARCHITECT—25, married, 1 child. 5½ yrs. AAF flying officer, radar instructor and navigator. A. B. Harvard Univ., and 1 yr. Harvard School of Design. 1 yr. experience in arch. design and drafting. References. Desires position with a future. Prefers Boston or vicinity. Box E-202.

ARCHITECT—Discharged Army Engineer Officer (Maj.) 27, graduate in architecture, 6 yrs. experience in administration, architectural design, supervision of all types construction. During war served as Resident Engineer on cantonment and airfield projects totaling $35 million. Interested in position with arch.-eng. organization in exec. capacity. Consider overseas assignment. Min. salary $6,000 per annum. Box E-162.

GRADUATE ARCHITECT—28, varied construction and office exper. Chief draftsman and instructor in the Army for past 2 years. Desires position with firm designing modern houses. Box E-163.

STRUC. ENG.—7 yrs. exper. wood, steel, mech. and arch. design. Age 28. Versatile, prac. Want pos. with arch. with poss. future partnership. West Coast. Ex Army Off. Box E-158.

ELEC. ENGINEER—28, exper. in drafting and as coll. instr. Grad. work in elec. eng. Desires eng. or acad. position. Box E-159.

MEN WANTED

ARCHITECTURAL DRAFTSMEN—(2) capable of producing complete working drawings with knowledge of commercial and industrial work. Salary according to ability to produce. Mid-south firm of architects. Give complete information. Box R-198.

INTERIOR STORE DESIGNER—with knowledge of merchandising by Mid-south firm establishing a new department. Give full particulars. Splendid opportunity for responsible party. Box R-199.

ARCHITECTURAL DRAFTSMAN — First class draftsman wanted by architectural firm in Ohio. Box R-200.

SALES ENGINEERS—Architectural or civil. Large manufacturer of building materials has need for three men, 35-40 yrs. of age, good personality, to contact leading architects, building engineers, etc. Locations Chicago, New York and Atlanta. Permanent positions and opportunities for advancement. Box R-201.

ARCHITECT, ENGINEER, or ARCH. ENGINEER—Needed by large lumber & building company in West extensively active in the constr. field. To help assist in setting up a prefabrication plant. Box R-202.

ARCHITECTURAL DEPARTMENT HEAD & ASSTS.—Progressive lumber company, Denver, wants man to head arch. design & production dept. for small homes work. Need not be regis. architect. Also require two young men with some drafting and general arch. exper. Will train. All should be able to handle customer contacts. Box R-203.

ARCHITECTURAL DRAFTSMEN—To work in architect's office in Florida. Should be familiar with preliminary layouts and working drawings on apartments, hotels and commercial structures. Will pay good salaries to men familiar with tropical arch. Box R-204.

ARCH. DESIGNER—To work in Chi. Exper. in design and constr. required. Sal. proportionate. Interesting diversity of problems to the proper man. Shaw Naess and Murphy, 80 E. Jackson Blvd., Chicago, Ill.

DESIGNER—Cap. of rendering persp. colored sketches for the redecor. of churches and pub. auditoriums, etc., must have complete knowl. of Catholic art and decor. designs. Pref. given combination man who can also take measurements, prepare est., close sales and super. Reliable firm, med. size Ill. city, low living cost. Contracts in various states. Advise exper., starting sal., relig., snapshot, phone, refs. Box R-178.

ESTIMATOR-DRAFTSMAN & GENERAL FOREMAN—wanted by newly org. constr. firm in W. Fla. Must be thoroughly famil. with masonry bldg. constr. and gen. concrete work. Age, detail educ. and exper. record, min. sal. acceptable, date avail. and refs. Box R-179.

DESIGNER—If you know store design and want to locate yourself with firm that is going places and that will reach the top pos. in the next 5 yrs., drop us a line. We need you and you need us. Box R-180.

ARCH. & DESIGNER—with 1965 ideas for So. Texas devel. company. Good drawing account and interest in firm for right man. Box R-181.

BLDG. SUPERINTENDENT — Some arch. eng., estim., quantity survey, indus. and res. constr. exper. Write with confidence, stating full quals., exper. and sal. desired. Excel. oppor. for right man. Box R-182.

ARCH. OR DRAFTSMAN—Exper. in reinforced concrete, mod. des. Either to open an off. on partnership basis or on a sal. or fee basis. N.Y. area. Box R-183.

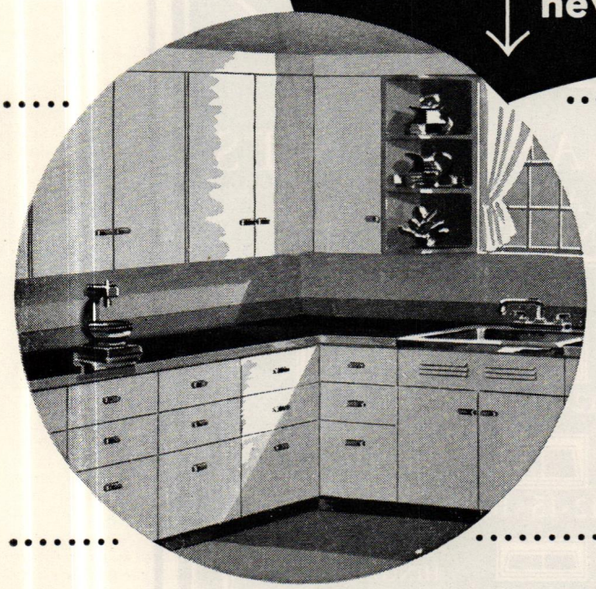
EXPER. DESIGNER-DELINEATOR-DRAFTSMAN—Wanted by arch. released from service re-estab. office in Houston, Tex. Job leading to association. Box R-184.

ARCHITECT—Grad. Preferably regis. Good oppor. for young man looking for perm. indus. connection. Phila. area. Box R-185.

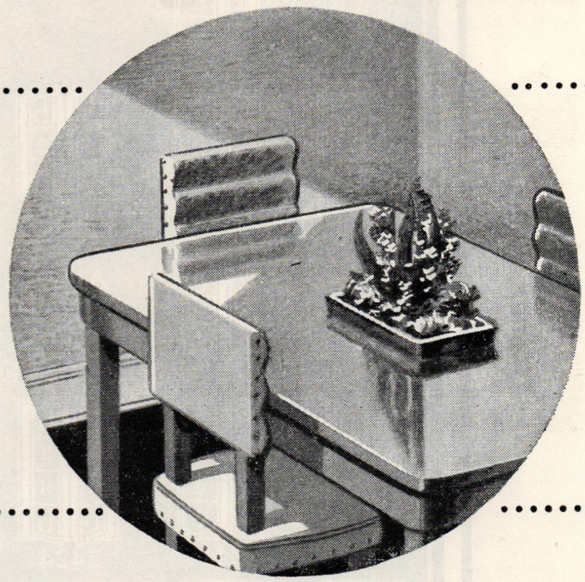
ARCH. DRAFTSMEN—Wanted by N.Y. arch. with winter quarters along Gulf Coast of Fla. Would like to interview smart young men with basic knowl. of eng. and sound concern about indigenous arch. Good future. Box R-186.

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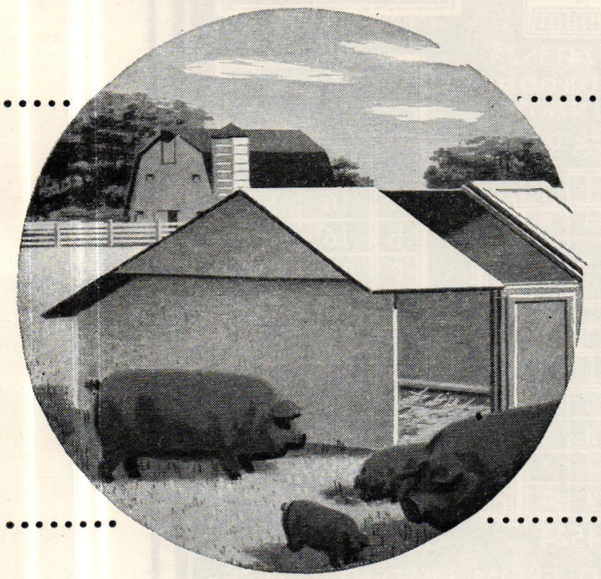
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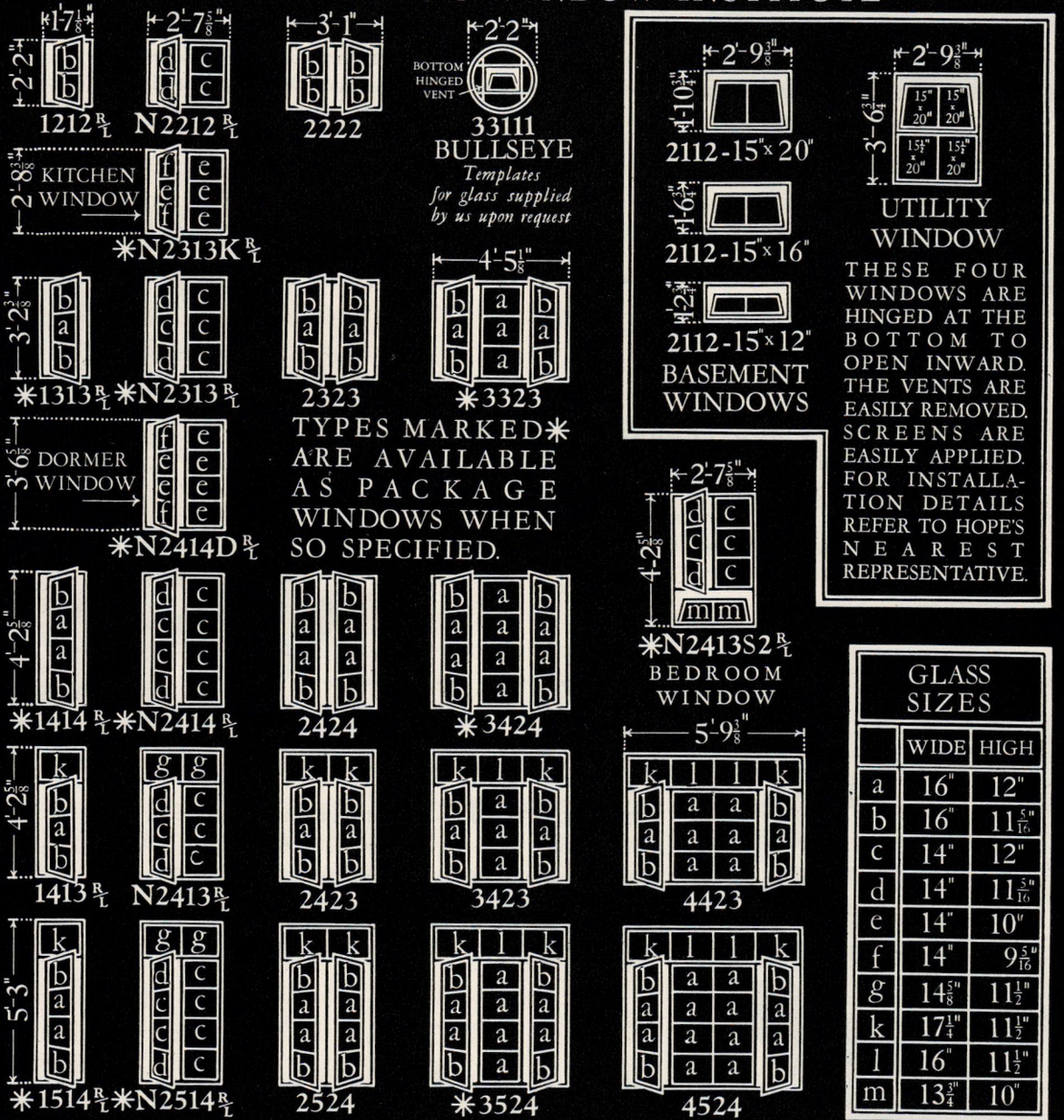
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STEEL RESIDENCE CASEMENTS

POSTWAR TYPES AND SIZES AS APPROVED BY THE METAL WINDOW INSTITUTE

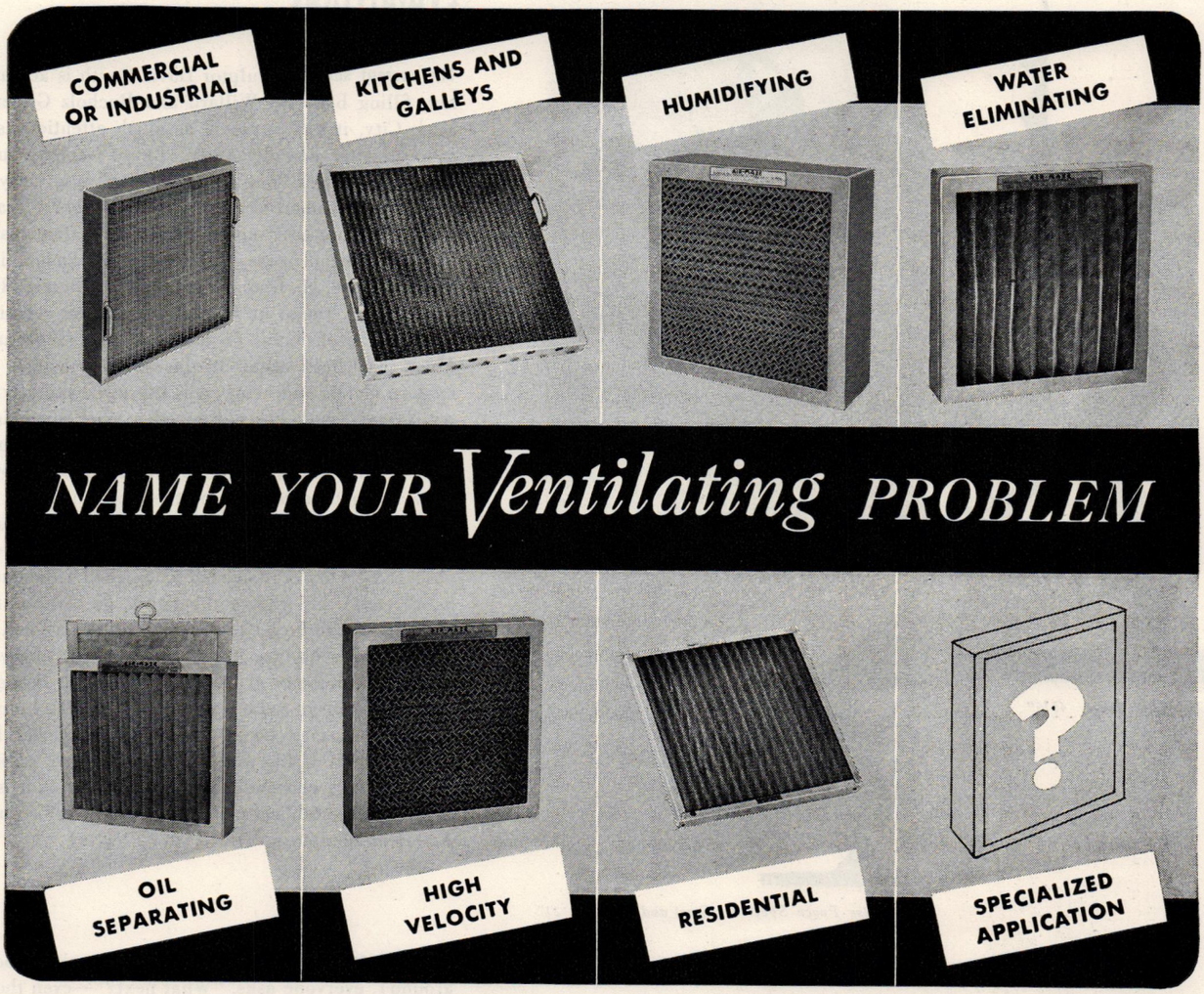


GLASS SIZES

	WIDE	HIGH
a	16"	12"
b	16"	11 5/16"
c	14"	12"
d	14"	11 5/16"
e	14"	10"
f	14"	9 5/16"
g	14 5/8"	11 1/2"
k	17 1/4"	11 1/2"
l	16"	11 1/2"
m	13 3/4"	10"

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Constant research in engineering over 3000 types and sizes of filters in over 20 years, gives Air-Maze rich experience in handling *any* ventilating problem. Write us about *your* particular problem and let us solve it for you.

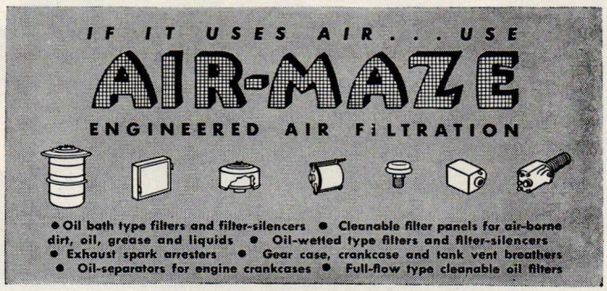
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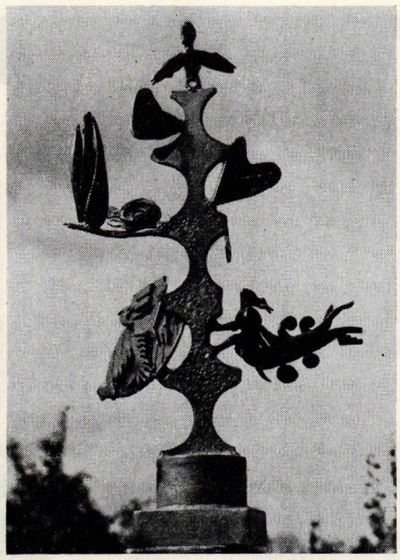
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"Cockfight" Steel. 45¼"



"Pillar of Sunday" Steel. 31"

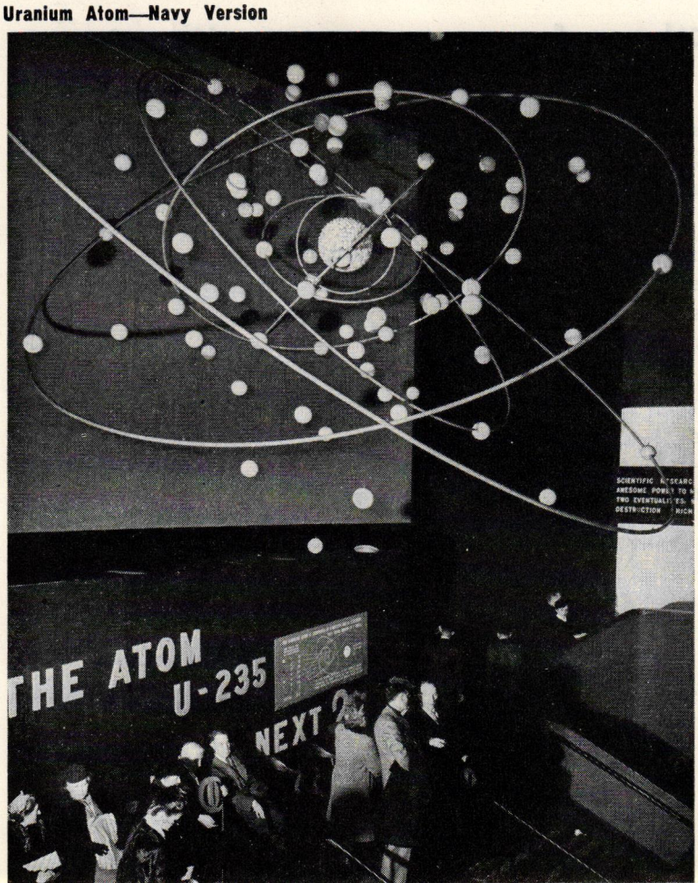


"False Peace Spectre" Steel and Bronze. 21"

EXHIBITIONS

The current show of sculptor David Smith is actually his fifth: but, filling both the Willard and Bucholz Galleries in New York City, it has attracted as much attention as if he were a spectacular new discovery. Emily Genauer in the *World Telegram* finds it "one of the most extraordinary exhibitions in seasons"; Robert Coates in the *New Yorker* praises Smith's "searching honesty" and "marvelous craftsmanship"; while Stanley Meltzoff in the *Magazine of Art* finds "his occasional failures noble, his frequent successes brilliant." The richness, passion and range of his subject matter combine with his technical proficiency to make Smith's sculptures unique. Much has been made of his craftsmanship: working in modern metals and using tools borrowed literally from industry, David Smith has developed a skill which is matchless. But the power of his work rests only secondarily on dexterity: Dr. W. R. Valentiner of Detroit's Museum of Art aptly remarks that he is "one of the few American sculptors to whom the new idea is as important as the new form." These new ideas are intense, complex and humane—and seldom obscured by his craftsmanship. In such pieces as his "Cockfight" (left), his witty and accurate observation is so precise as to make one forget the daring cantilevers and perfect balance of the sculpture itself. Smith is not always so genial: witness the ferocity of his satire in "False Peace Spectre"—bird of war disguised as dove of peace, wilted olive branch in its beak, crushed bodies in its talons, aerial bomb in its womb. Much of his work may seem harsh, oblique and not beautiful in a conventional sense, but all of it is rewarding. This show establishes Smith in the very front ranks of American sculptors.

Uranium Atom—Navy Version



When it comes to talk of the atom (there's a good deal of it around), everyone asks, "What next?"—even the U. S. Navy and as far as armed offense goes, they should know. Recently, while the big brass of world diplomacy pondered the advisability and inadvisability of hiding the newly split atom under a bushel, the Navy Special Devices Division has been busy organizing a show on atomic energy, jet propulsion and latest radar developments now on exhibition at New York's Museum of Science and Industry. The awesome feats of Naval scientific researchers have become thoroughly familiar to the public through similar shows on other subjects; current ones are now being held in Philadelphia and Chicago on related subjects. The purpose of the New York exhibition is to discourage further use of atomic energy in warfare by apprising the public of the most advanced weapons such as specialized bombs, rockets and self propelled planes, Allied and enemy—in other words, to point out how perilous is even today's springboard for new destructive inventions of the future, leaving the eventuality to the imagination of the observer. The pride of the exhibitors is the atom model (see cut) which is made as eerie as it is beautiful through subtle use of soft-hued lights. Fortunately the Navy doesn't give away any security matters so not even a background in physics is required to understand the show. The large ball in the center of the model is the nucleus of the uranium atom, composed of 92 electrons. These whirl in seven shells. For scale, it is interesting to know that if the orbits of the model had been enlarged as much as the electrons have been, their diameters would be ten miles.

(Continued on page 148)

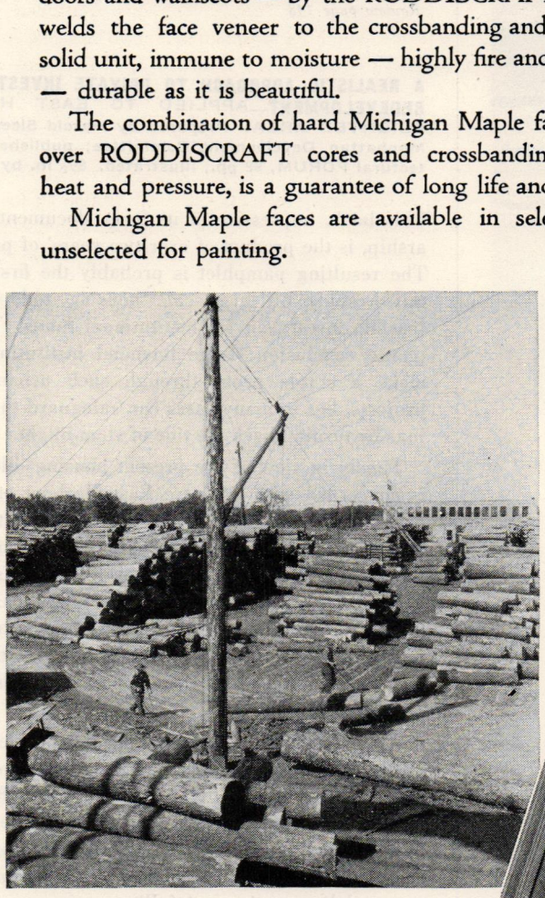
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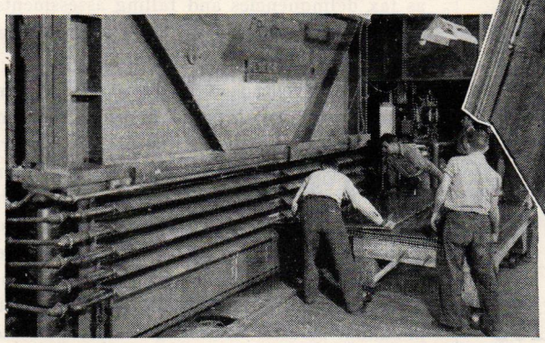
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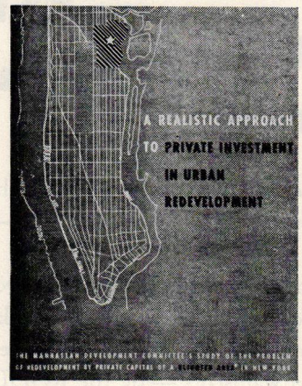
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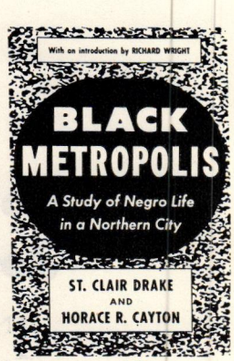
City.....Zone.....

County.....State.....

BOOKS



Review page 148



Review page 150

A REALISTIC APPROACH TO PRIVATE INVESTMENT IN URBAN REDEVELOPMENT—APPLIED TO EAST HARLEM AS A BLIGHTED AREA: Prepared by Harold Sleeper, AIA, for the Manhattan Development Committee; published by the Architectural FORUM, 92 pp., illustrated. 8½ in. by 11 in., $2.50.

This book, impressive in its form, documentation and scholarship, is the product of over two years' of painstaking work. The resulting pamphlet is probably the first completely detailed study of large-scale housing redevelopments as a feasible investment for institutional funds. The report's emphatic conclusion: large financial institutions not only can make a stable profit through such urban redevelopment projects, but in many cases can safeguard their present holdings by turning back the tide of slum-blight.

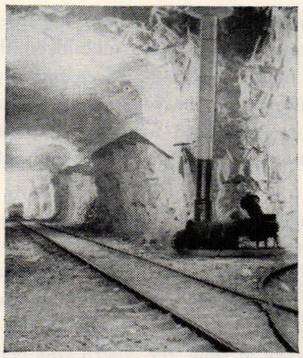
Timely in view of the present housing dilemma, the study is concerned with 642-acre East Harlem, one of New York City's most blighted sections. In scope and attention to detail, it is a milestone in analytical planning. Further, it is probably the first time all the interested groups—banks, insurance companies, architects, planners, and municipal departments—have cooperated in such a project. A neighborhood has been used as the basic planning unit complete with stores, garages and schools. The entire development entails the integration of nine such units.

Although it deals with the special problems of a specific area, the report's findings may be studied profitably by many a U. S. city. Like other decaying areas, East Harlem has been losing population; its residents are understandably eager for better living standards. Aside from the undesirable social aspects of such areas, they throw a heavy burden on the city as tax delinquencies and falling assessments mount. Metropolitan transportation is taxed as expansion is dictated to serve suburbs swelled by the exodus.

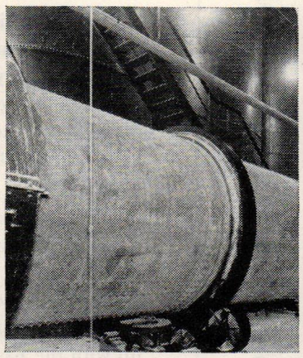
Slum redevelopment can save large financial institutions from heavy losses in areas in which they hold property, the report claims. Further, if the projects undertaken are of sufficient size, they can set up check-walls against the spread of blight from surrounding areas. One of the report's most valuable contributions is complete cost figures on the project outlined, along with varied statistical analyses. These tables, plus an extensive bibliography, photographs and drawings, make the report a "must" for all cities or institutions involved in similar studies. *(Continued on page 150)*

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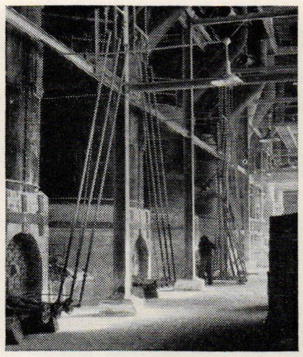
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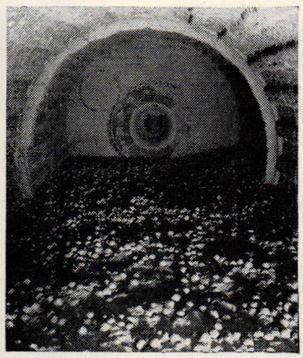
1 GYPSUM MINE. One of 9 National Gypsum deposits which insure a constant supply of selected gypsum rock.



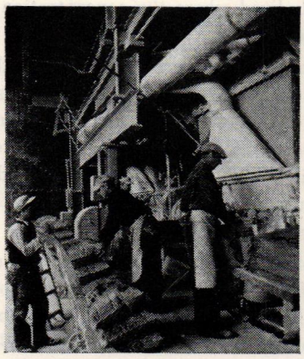
2 ROTARY DRYER. First step in the processing of gypsum is the removal of surface moisture from the rock.



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SIZES—32 x 32 x 80
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WALLS — BONDERIZED, GALVANIZED STEEL. Finished inside and out with white baked-on synthetic enamel.

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ACCESSORIES—Curtain and soap dish.

NEW *Cadet* SHOWER . . .

Redesigned along modern lines with improved construction features. The Fiat tension locking joint is used on all four corners and in joining the side walls with the receptor. No screws are used in any of these joints. This construction speeds erection on the job and assures a watertight shower cabinet with unusual strength and rigidity.

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There are, of course, several points on which the book may be attacked; the easy dismissal of the race problem; the assumption that 80% of the present population can move elsewhere with no discomfort and the relationship of estimated building costs to the present spiraling price structure are cases in point. However, the work of Mr. Sleeper and the Manhattan Development Committee deserves the careful attention of all those concerned with the social and financial problems of our economy.

BLACK METROPOLIS: A Study of Negro Life in a Northern City, by St. Clair Drake and Horace R. Cayton. Introduction by Richard Wright. Harcourt, Brace and Co., New York. 5¾ in. by 8¾ in. 809 pp. $5.

The "metropolis" exhaustively studied in this work by Drake and Calton is Chicago's South Side. It is also a diagram of life in a score of encysted sub-cities—the black-belt enclaves of New York, Philadelphia, Cleveland, Detroit or Pittsburgh.

Work for this book began as a research investigation into delinquency among Chicago's Negro children, then developed into a summary of the indispensible community context that stretches its seething length between the stockyards and Lake Michigan. The result, with obvious comparability to the Lynds' *Middletown*, is the complete anatomy of another way of urban Man.

The organizing law of black belt life, as Duke and Cayton see it, is its character of a frozen Ghetto. "It is not unusual", they comment, "for a language, nationality or racial group to begin life in the city as a 'colony'. The distinctive thing about the black belt is that while other such colonies tend to break up with the passage of time, the Negro area becomes increasingly more concentrated." In 1910, we are told, there were no Chicago neighborhoods in which Negroes were over 61 per cent of the population. More than two-thirds of the Negroes lived in areas less than 50 per cent Negro. By 1930, almost two-thirds lived where the concentration was from 70 to 90 per cent Negro.

Lacing Negro families more and more tightly into the Ghetto's eight square miles have been the "restrictive covenants" to which Duke and Cayton charge the perpetuation of black belt overcrowdedness, misery, social disorganization. Bronzeville, as it is sometimes called, has lived a history of mounting pressure as its population swelled, as the bands about it grew firmer.

The authors of *Black Metropolis* devote most of its chapters to description of the effect on its third of a million inhabitants, of this "delicately woven chain of armor". The book describes the processes that mold Negro patterns of work, play, press, religion, education, crime, vice and politics, that make most South Siders sixth graders, 65 per cent of them earn their living by manual labor; that affect its 500 churches and its 500 police stations; that give it the highest disease and death rate in the city.

A monument of social science, *Black Metropolis* draws heavily on a rich body of hitherto unpublished WPA fieldwork in the form of vivid narrative material as well as charts, graphs and statistical comparisons of an immense number of social measures. The text appears to be arranged upon the assumption that the truths concerning Negro city-dwellers need a multiplication of proof to be believable. Yet this very prolixness has effect. The argument emerges with the unarguability of a map that is blackened with coincident distributions of residential blight, poverty, disease or crime.

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THE WINNERS

in the Chicago Tribune's $24,000.00 Chicagoland Prize Homes Competition

The Jury of Awards, appointed by the Chicago Tribune to select the prize winning entries in the Chicagoland Prize Homes Competition, met in executive sessions on December 26 and 27, 1945.

Boyd Hill, A.I.A., appointed by the Chicago Tribune to act as Professional Adviser in conducting the competition, reported that a total of 938 entries had been received. All 938 entries submitted in the competition were examined by the Jury of Awards which selected the entries of the following persons as winners of the 24 individual prizes of $1,000.00:

Authors of Winning Solutions to Problem No. 1

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44 Eucalyptus Road
Berkeley 5, Calif.

ENS. RALPH D. PETERSON, JR.
405 W. 23rd Street
New York, N. Y.
and
LIEUT. C. S. WOOLFORD, JR.
375 Warwick Avenue
South Orange, N. J.

CAPT. A. J. SACKVILLE-WEST
414 N. Custer
Colorado Springs, Colo.

CHARLES W. SCHROEDER
425 E. 14th Blvd.
Chicago 5, Illinois

LIEUT. RAY STUERMER
630 E. 84th Street
Chicago 19, Illinois

LIEUT. D. CODER TAYLOR
140 S. Dearborn Street
Chicago 3, Illinois

WALTER J. THIES
3117 N. Main Street
Dayton 5, Ohio

J. FLOYD YEWELL
10 E. 40th Street
New York, N. Y.

Authors of Winning Solutions to Problem No. 2

LIEUT. W. R. BURNS, JR.
Ferry Bldg.
San Francisco 11, Calif.

CARL L. CEDERSTRAND
630 Greenleaf Avenue
Wilmette, Illinois

EDWARD N. GLIDDEN, JR.
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Associated Architects
326 St. Paul Pl. Baltimore 2, Md.

HERBERT C. HANSON
12206 Princeton Avenue
Chicago 28, Illinois
and
HENRY MARTORANO
4940 Fletcher Street
Chicago 41, Illinois

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Golf, Illinois

ERIC WENSTRAND
4317 N. Dayton Street
Chicago 13, Illinois

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MERWIN H. FREEMAN
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Los Angeles 35, Calif.

RAYMOND W. GARBE
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Wheaton, Illinois

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Stillwater, Minn.

ARTHUR R. MYHRUM
922 Monroe Avenue
River Forest, Illinois

LIEUT. RAY STUERMER
630 E. 84th Street
Chicago 19, Illinois

HOWARD J. UEBELHACK
1772 Washington Avenue
Wilmette, Illinois

To the winners, the Chicago Tribune extends its congratulations. To all entrants in the competition, and to the following members of the Jury of Awards, the Chicago Tribune wishes to express its sincere thanks for their cooperation: Paul Gerhardt, Jr., A.I.A., Chairman; Philip B. Maher, F.A.I.A., Co-chairman; Irvin A. Blietz, builder; Arthur E. Fossier, builder; John O. Merrill, A.I.A.; J. E. Merrion, builder; John R. O'Connor, builder; John W. Park, architect, and A. N. Rebori, architect.

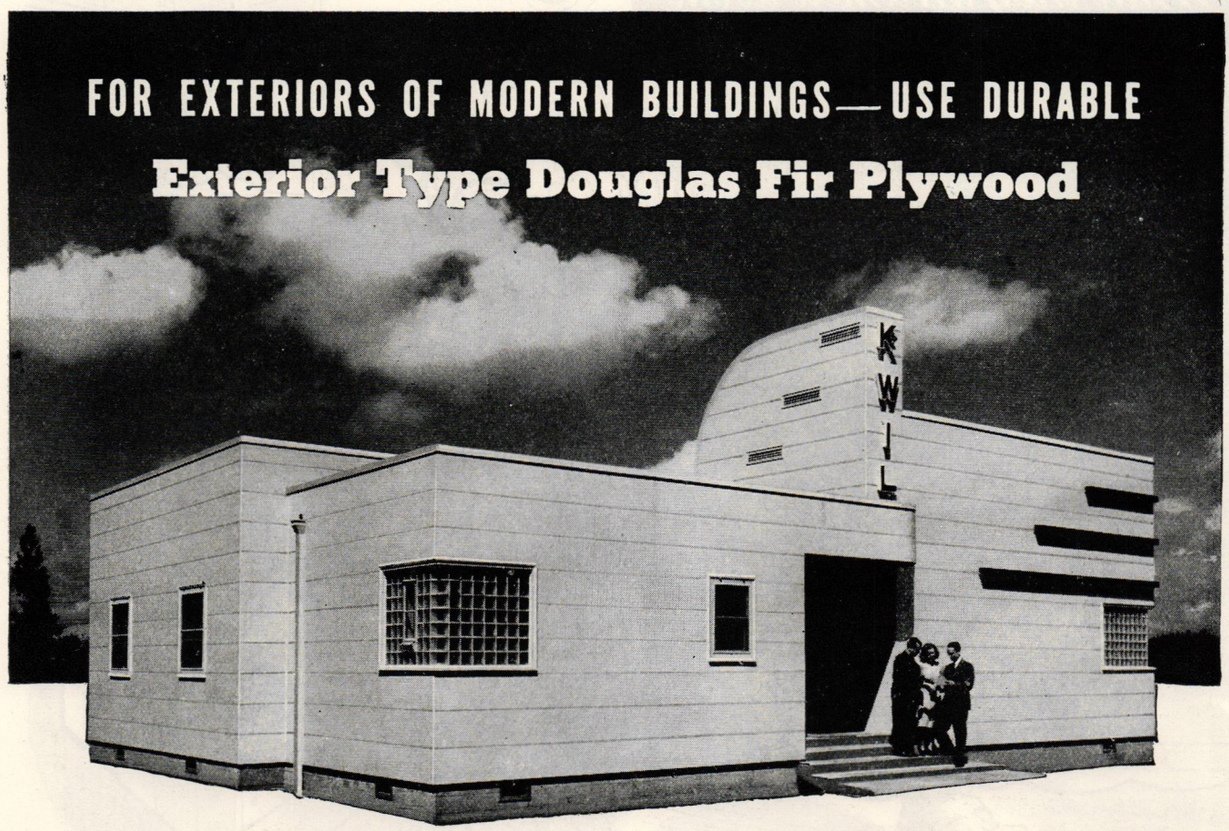
The winning designs will be reproduced in full color in the Chicago Sunday Tribune, starting in February.

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• Exterior type Douglas fir plywood—made with completely waterproof synthetic resin binder—has proved itself a superior material for exterior siding on homes, farm buildings, business and industrial structures. The large, rigid panels cover wall areas with a minimum of handling, sawing, fitting and nailing. They bend easily to simple curves without splitting. They will **not** delaminate—**even in boiling water!**

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• Write the Douglas Fir Plywood Association for any technical data you desire. For prices and delivery information, see your lumber dealer.

Modern streamlined effects are easy to accomplish with large, rigid panels of durable Exterior type Douglas fir plywood. This radio transmitter building is a pleasing example of the material's adaptability—a building that is not only more attractive NOW but will remain so over a longer period of time. Plywood's cross-laminated construction adds strength and rigidity to framing.

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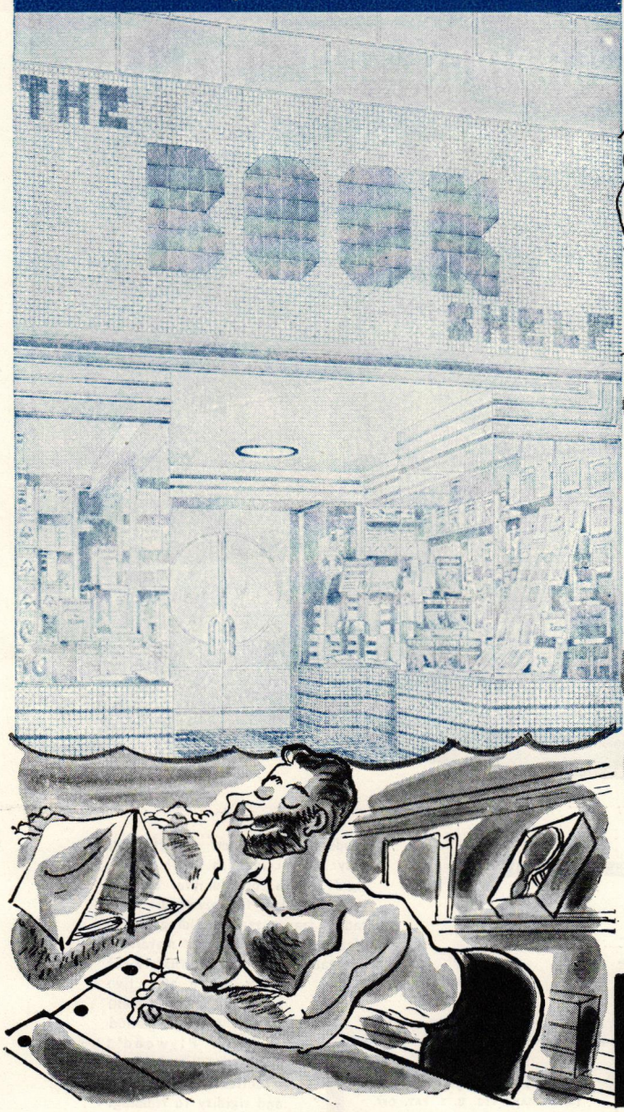
For permanent outdoor use, for marine use, and for indoor use where moisture conditions are abnormal, specify ONLY Exterior type plywood. It is easily identified by the "grade trademark" EXT-DFPA on the edge of every panel.



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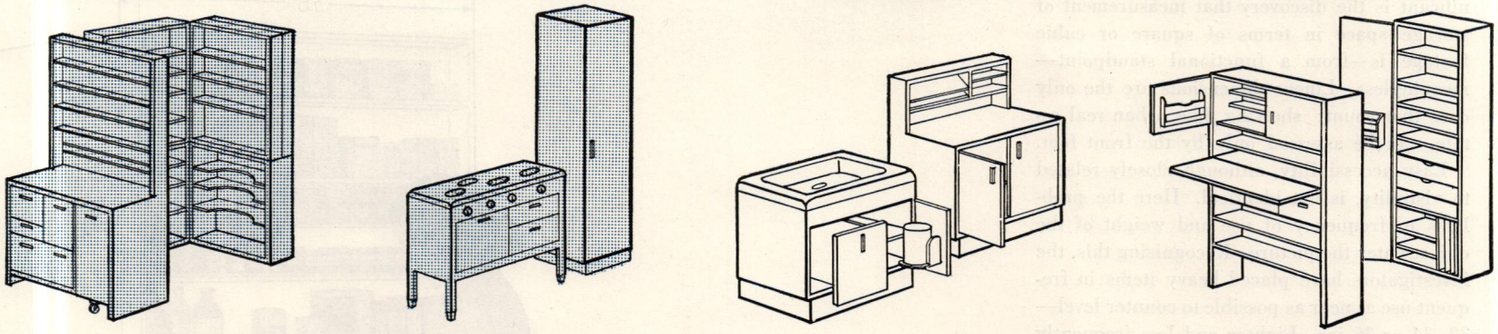
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MIX CENTER | RANGE CENTER | SINK CENTER ← (next month) → SERVE CENTER



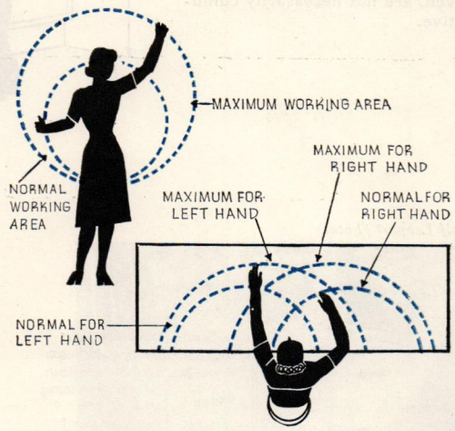
A NEW LOOK AT THE KITCHEN:

Two specialists—beginning with a bedrock scrutiny of what a housewife does and what she needs in the kitchen—reach some surprising conclusions. First of two articles which may shake masculine concepts of how to design a kitchen.

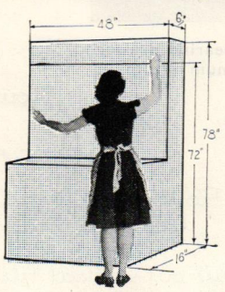
Two modest but positive women—Mrs. Mary Koll Heiner and Miss Helen E. McCullough—are just now completing the first leg of a research project which promises to put the skids under many of the widely-held but seldom examined shibboleths of kitchen design. Working at Cornell University's College of Home Economics, under a grant established by the American Central Manufacturing Co., of Connersville, Indiana, they have dissected the American kitchen, pre-war and post. With the care and precision of an entomologist at work on a bug, they have measured, weighed and analyzed. Beneath the streamlined fittings and stainless steel, they have found much that is good, especially from the mechanical angle; but they also uncovered much that they considered dead wrong. Indeed, they have reached conclusions which imply the redesign of practically every item which goes into a kitchen today. And they have made some neat, astonishingly compact proposals of their own.

Having surveyed the field, one might, as they put it, "conclude that designers and manufacturers had thought of everything pertaining to kitchens and that nothing remains to be achieved by others . . . But a careful analysis of these plans shows that such is not the case." First flaw they find in most current designing is its point of departure: the design starts with the tool instead of the user, with the gadget instead of the housewife. And even when the housewife *is* considered, knowledge of her habits, needs and preferences is apt to be sketchy or inaccurate. Indeed, as the researchers dryly remark "the dearth of basic information—both as to physiological and psychological aspects—gives one pause."

Before beginning any designing on their own, Mrs. Heiner and Miss McCullough decided to dig out this basic data. And what they have assembled is both significant and useful. For perhaps the first time, the actual types and quantities of foods, utensils and china used by the average urban family of four have been established and tabulated.* The actual space required by each item has been measured. Then the problem of storage and use has been analyzed in relation to four critically important criteria: (1) The physical limitations of the housewife—her capacity for stooping, reaching and lifting; (2) Organization of all storage in terms of first-use; (3) Clear visibility for all items; (4) Easy accessibility for all items.

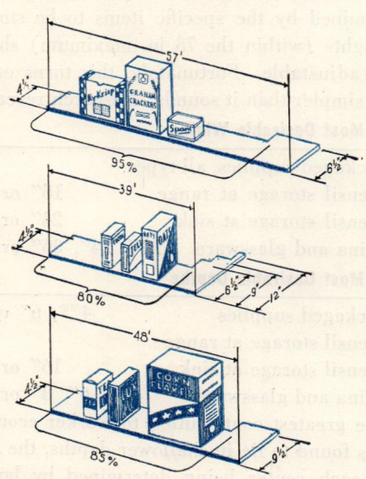


To reduce the housewife's fatigue, they studied the normal and maximum work curves for women—a technique which, as they tartly comment, has long been used in factory layouts for men. These curves immediately established three maxima for all work unit dimensions: width should not exceed 48 in., depth should not exceed 16 in. and top shelf should never be more than 72 in. from the floor.



Storage in terms of first-use led to a classification of all supplies and utensils according to where the particular operation began. All items used first with heat—e.g., canned vegetables and saucepans to cook them in—are stored at the *range center*. Items requiring mixing, such as cakes and breads, together with the necessary utensils, such as bowls, electric mixers, flour sifters, etc., are organized into a *mixing center*. All supplies and utensils used first with water—e.g., prunes and saucepan to cook them in—are thus grouped in the *sink center*. Finally, all glass, china and silverware connected with serving food, as well as such foods as bottled mustard or ready-to-eat cereals, are stored in the *serve center**. With these four work centers, the researchers establish an important functional principle which challenges the seemingly logical habit of arbitrarily storing like objects together.

Clear visibility as a criterion led to the principle of all storage being only one row deep. (Only exception to this is the case of glass and chinaware.) Wasteful of space as this might at first appear, Heiner and McCullough have proved it quite the contrary. This they did by the simple expedient of securing actual samples of every item on their lists, arranging them according to first-use and then computing the necessary space. Storage of 175 food items was measured three ways:



These measurements indicate that, if visibility is a criterion, most kitchens are hope-

* At this stage of the project, only packaged, non-perishable foods have been studied. The storage and handling of perishable foods (milk, meats, butter) and semi-perishable (bread, vegetables, etc.), will be studied later.

lessly inefficient: typical shelving there is 9 or 12 in. deep. Yet, stored broadside, no packaged food needs shelving over 6½ in. deep: stored endwise, only 10% of all items require 9 or 12 in. depth! But even more significant is the discovery that measurement of storage space in terms of square or cubic footage is—from a functional standpoint—meaningless. Linear dimensions are the only ones that count: shelving, like urban real estate, can be assessed only by the front foot.

Easy accessibility, although closely related to visibility, is not identical. Here the problems of frequency of use and weight of the object enter the picture. Recognizing this, the investigators have placed heavy items in frequent use as near as possible to counter level—32, 34 or 36 ins. Lighter and less frequently used items were distributed above and below counter height, though in general the larger and heavier items are wisely—from the point of view of cabinet design—placed below the counter. One interesting result of this scrutiny of easy accessibility is the redesign of the kitchen range. (See p. 158)

In general, both visibility and accessibility have been achieved through the use of the same devices: shallow, adjustable and cutback shelves; vertical, horizontal and slanting files; combinations of these with counterbalanced tip-out bins; pull-out panels; and a tray for an electric mixer which swings out and up to counter level like a typewriter.

Faced thus with two sets of dimensional requirements—one for the cook and one for her utensils and supplies—Heiner and McCullough then set about the problem of resolving them. "In this connection," they feel, "the question of the functional stacking and storing of utensils and dishes needs to be cleared up. Items of identical size and shape used in numbers—cups, saucers and plates of a given size—can be stacked and still meet the requirements of easy accessibility. But articles of graded size or those used singly—such as platters, bowls, saucepans and skillets—require wasteful and frustrating rehandling if stacked, in order to reach the desired size." In any case, widths and depths should be determined by the specific items to be stored; heights (within the 78 in. maximum) should be adjustable. Fortunately, this turns out to be simpler than it sounds. Research revealed:

Most Desirable Widths

Packaged supplies, all types	24″
Utensil storage at range	16″ or 24″
Utensil storage at sink	24″ or 28″
China and glassware	20″, 24″, 36″ or 48″

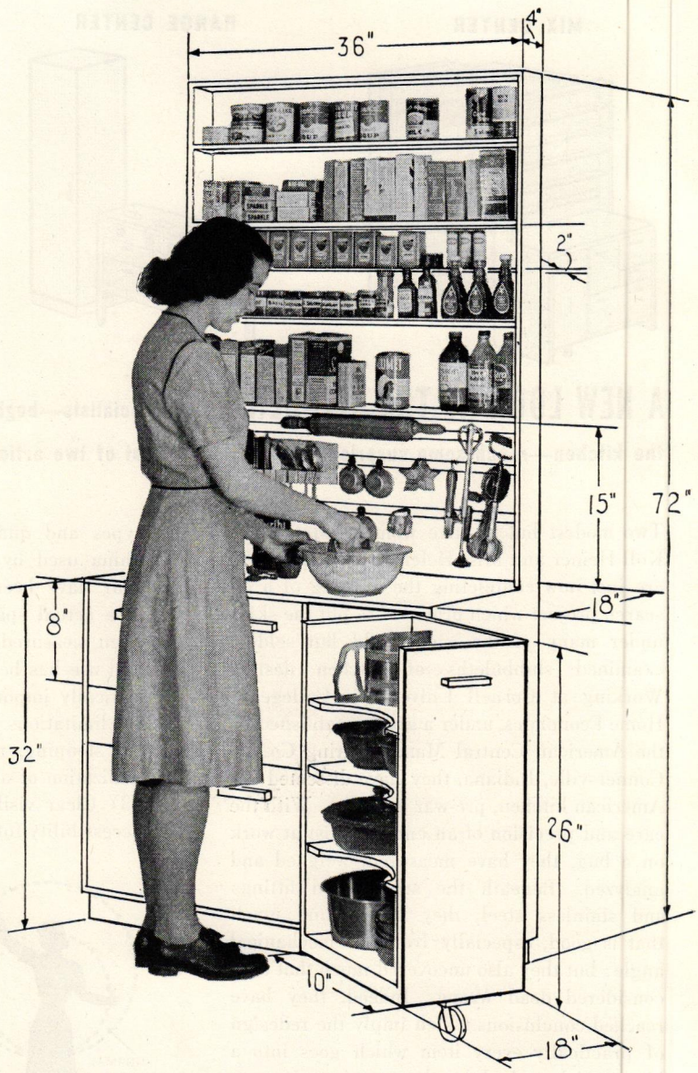
Most Desirable Depths

Packaged supplies	4″*, 6″ or 8″
Utensil storage at range	14″
Utensil storage at sink	16″ or 18″
China and glassware	6″, 8″ or 12″

The greatest contribution to worker economy was found to lie in shallower depths, the limit in each center being determined by largest item to be stored.

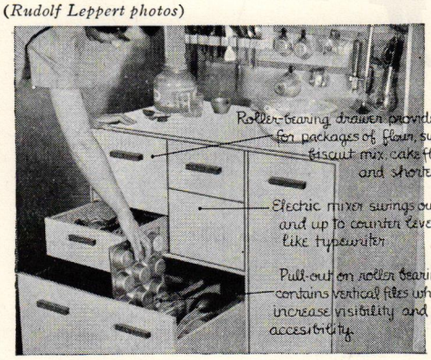
* 4½″ would be required if unit had doors.

MIX CENTER designs show how effectively Heiner-McCullough research can be used to build u

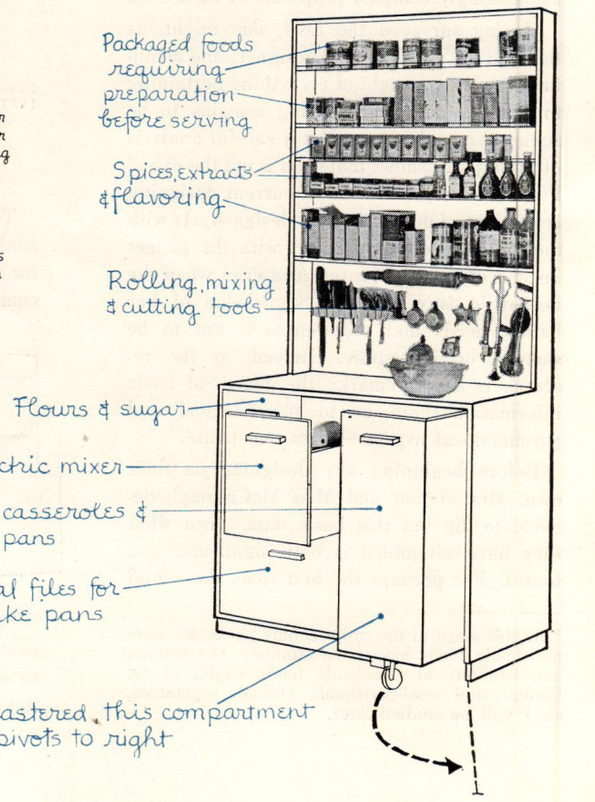


Note: Interior dimensions, where given, are not necessarily cumulative.

(*Rudolf Leppert photos*)



VERTICAL FILES in big roller-bearing drawer guarantee visibility and minimum strain in getting at cake and pie pans.



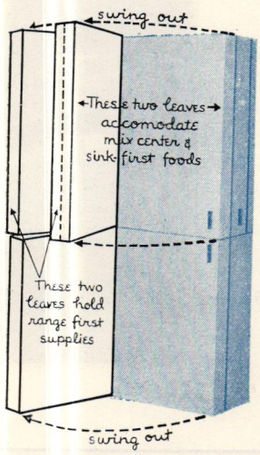
atisfactory equipment, economical of space and energy.

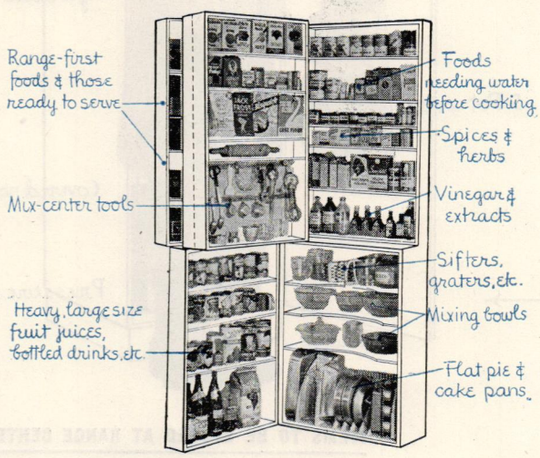
Both Mrs. Heiner and Miss McCullough disclaim any intention of designing kitchen equipment: but this is true only in a technical sense. In their own research they have used wood mock-ups. They have made no effort to specify materials or to work out construction details. But that basic design work has been finished is readily apparent in the units shown on these pages.

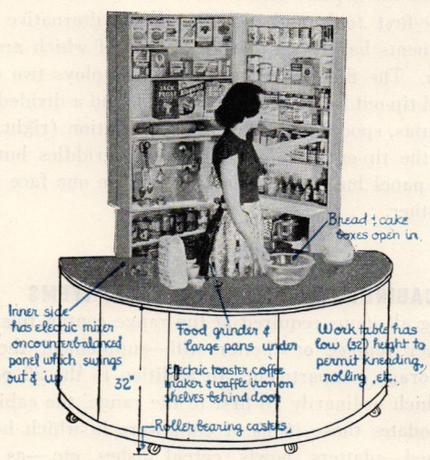
THIRTY SIX INCH MIX CABINET This unit is designed to serve both mix and sink centers—i.e., for foods whose preparation requires either mixing or water or both before going to the range. It accommodates the 75 to 80 packaged foods required at both centers and the 45 to 50 tools and utensils used there first. It does not include saucepans or dishwashing equipment which in the researcher's opinion can only be stored at the sink center itself. To reduce shoulder strain in operations requiring kneading, beating and stirring, counter height is held to 32 in.

SWING STORAGE CABINET With no sacrifice to visibility or accessibility, this ingenious unit concentrates the 175 packaged supplies (representing one week's active needs for the urban family of four) into the astonishingly small volume of 16¼ cu. ft. It thus handles food storage for all four centers; moreover these items are organized in the upper leaves so that range-first items come in the outer two, mixing and sink-first items in the inner two leaves. The inner leaf also accommodates the 45 to 50 utensils required at the mix center. By adding the semi-circular work counter (right, below) a complete mix and preparation center is produced which is an alternative to the mix cabinet.









ITEMS TO BE STORED AT MIX CENTER

PACKAGED FOODS 62

Canned 16
- 4 cans fish
- 10 cans spices
- 1 can Baking Powder
- 1 can Cream Tartar

Glass 27
- 1 pt. molasses
- 1 pt. vegetable oil
- 1 pt. syrup
- 1 pt. flavoring brandy
- 3 (½) pt. herb vinegars
- 1 qt. cider vinegar
- 8 home prepared herbs
- 1 bottle garlic salt
- 1 bottle onion salt
- 1 bottle chili powder
- 1 bottle almond flavoring
- 1 bottle lemon flavoring
- 1 bottle vanilla flavoring
- 1 bottle maraschino cherries
- 3 jars food coloring paste
- 1 3 lb. jar vegetable shortening

Cartons 19
- 1 lb. brown sugar
- 1 lb. confectioner sugar
- 5 lb. granulated or 25 lb. sugar
- 5 lb. cake flour
- 1 (2 lb.) cornmeal
- 5 lb. or 25 lb. bread flour
- 1 pkg. prepared biscuit mix
- 1 pkg. prepared pancake mix
- 1 pkg. prepared frosting mix
- 1 pkg. cornstarch
- 3 pkg. prepared puddings
- 1 pkg. junket tablets
- 1 pkg. tapioca
- 1 lb. pkg. baking soda
- 1 pkg. salt
- 1 pkg. chocolate
- 1 pkg. cocoanut

UTENSILS 40

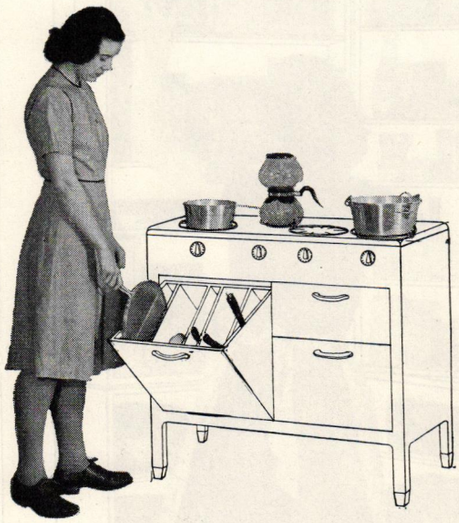
Measuring, Mixing, Sampling 15
- 1 Set measuring spoons
- 1 Set 4 (Mary Ann cups)
- 1 Glass cup
- 1 Mixing bowl 4 qt.-4½ qt.
- 1 Mixing bowl 2 qt.-2½ qt.
- 1 Mixing bowl 1 qt.-1½ qt.
- 1 Mixing bowl 1 pint
- 1 Sifter
- 1 Slotted spoon
- 1 Teaspoon
- 1 Tablespoon
- 1 Pastry blender
- 1 Spatula large
- 1 Rotary beater
- 1 Flat beater

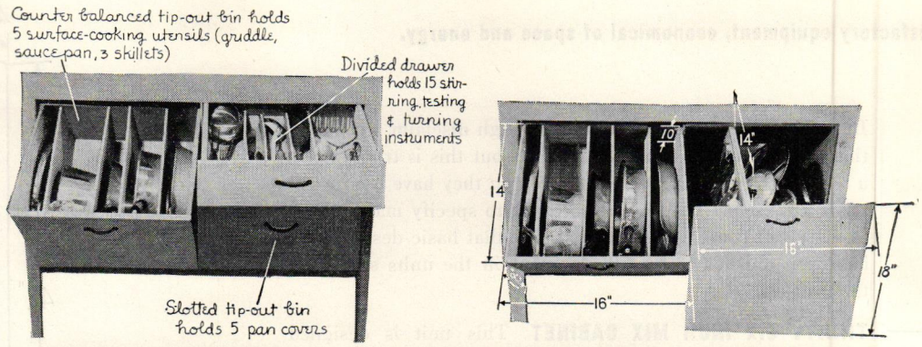
Grinding, Grating, Rolling, Cutting 7
- 1 Grinder
- 1 Set graters
- 1 Rolling pin
- 1 Large bread board
- 1 Large knife
- 2 Cutters for biscuit, cookies, etc.

Baking, Roasting 18
- 1 Angel cake pan
- 2 Layer cake pans
- 1 Square cake pan
- 3 Pie pans
- 2 Muffin tins
- 1 Long loaf pan
- 1 Squat loaf pan
- 1 Pan with trivet
- 1 Casserole-qt.
- 1 Casserole-1½ qt.
- 1 Set of 8 custard cups
- 2 Cookie sheets
- 1 Cake cooler

RANGE CENTER:

Three designs for storing range-first items.

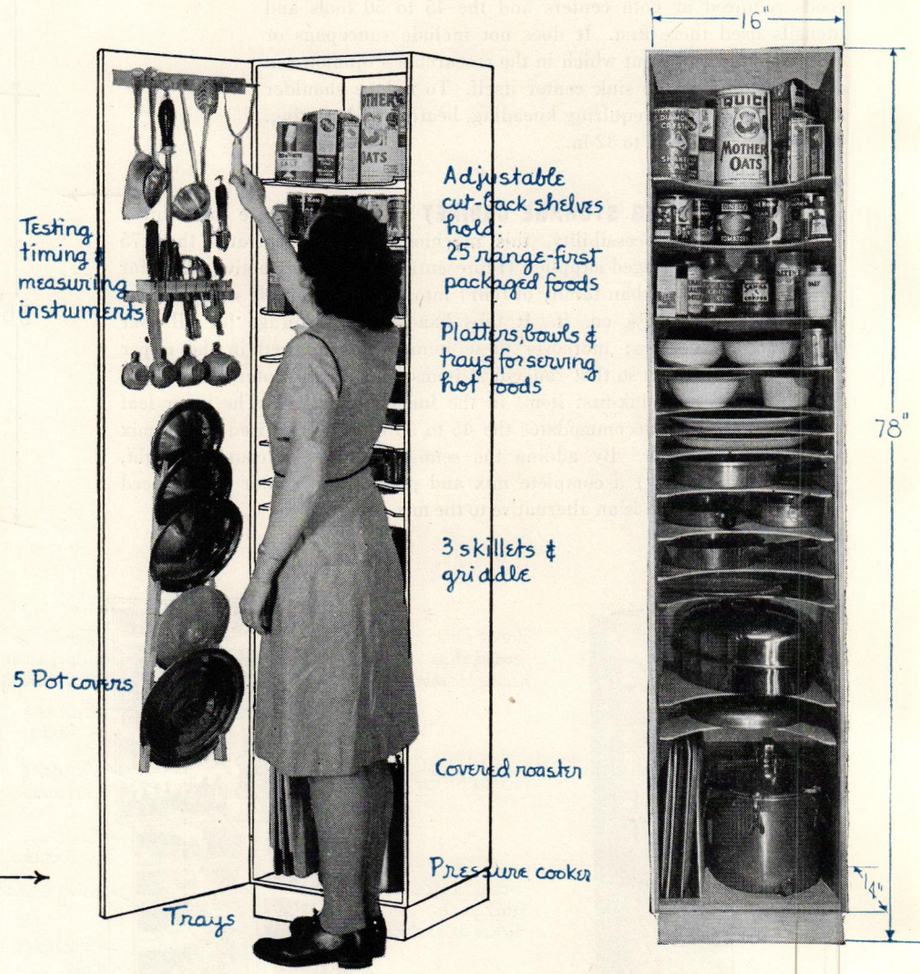




UNDER-RANGE STORAGE problem produced four alternative designs. Two are shown here: first variation (left) provides two tip-out bins and one slotted drawer; other design (right) holds same number of items, has ingenious two-faced pull-out.

UNDER-RANGE STORAGE COMPARTMENTS Under the impact of their effort-saving and safety standards, the conventional range has been broken into many pieces. And as far as Mrs. Heiner and Miss McCullough are concerned, it will never be reassembled into its old form. The oven and broiler, exiled from their former lair under the cooking surface, will hereafter hang at "a height which will permit good posture and clear visibility". Moreover, to minimize the danger of tipping over scalding liquids or fats, the one-row-deep principle has been applied to the range, thereby reducing it to a 16 in. depth. Under the cooking surface are stored 25 range-first tools and utensils. Four alternative storage arrangements have been developed, two of which are shown herewith. The first variation (above) employs two counterbalanced tip-out bins, vertically divided, and a divided drawer for spatulas, spoons, etc. The second variation (right, above) repeats the tip-out bin for skillets and griddles but uses a pull-out panel built for storage of tools on one face and lids on the other.

WALL CABINET FOR ALL RANGE-FIRST ITEMS Accommodating all items required at the range center, this cabinet can either replace or—better still—supplement the under-range storage compartment. In addition to the 20 packaged foods which ordinarily go first to the range, the cabinet also accommodates those items of chinaware in which hot foods are served—platters, bowls, cereal dishes, etc.—as well as vertical files for trays.



Mrs. Heiner and Miss McCullough want it clearly understood that they have provided for the types and amounts of food actually used by the average American family and not for the sort of food that might be ideal from either a culinary or a dietary point of view. Also it should be noted that, in both the centers shown here and in the sink-first and serving centers to appear next month, research has been deliberately confined to the active storage of one week's food supplies. It does not include reserve supplies such as home-canned vegetables which would ordinarily be stored in cellars. It does not deal with refrigerator or freezer storage, nor with the problem of semi-perishables like bread, potatoes. Such problems will, however, be covered in a later phase of the same research project.

ITEMS TO BE STORED AT RANGE CENTER

PACKAGED FOODS 21

Canned 8
- 6 cans vegetables
- 1 can meat
- 1 can coffee substitute

Glass 2
- 1 lb. coffee
- 1 lb. Sanka

Cartons 11
- 1 pkg. tea
- 1 pkg. tea bags
- 1 malted milk
- 1 cocoa drink
- 4 pkg. raw cereals
- 1 pkg. noodles
- 1 pkg. macaroni
- 1 pkg. spaghetti

UTENSILS 25

Top of Stove Cooking 10

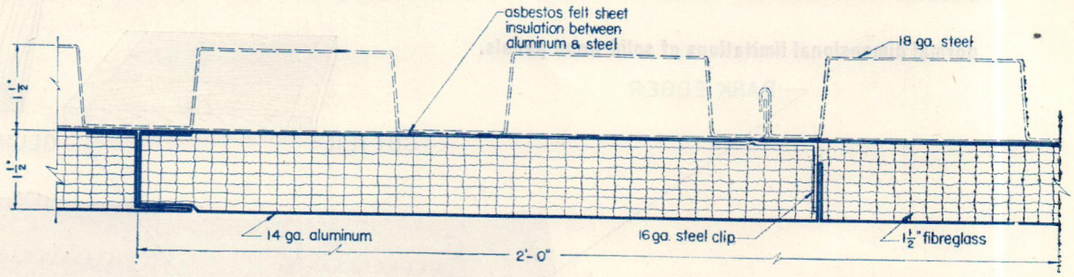
Regular use
- 6 Lids for sauce pans & kettles
- 1 Top section of double skillet—10 in.
- 1 Bottom section double skillet—10 in.
- 1 Small size skillet—8 in.

Occasional use
- 1 Griddle 10 in. or 12 in.

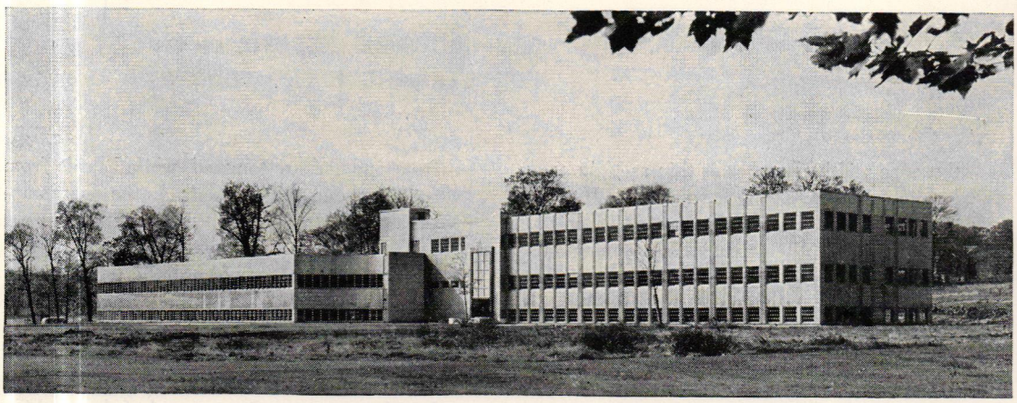
Measuring, Mashing, Testing, Turning, Carving 15
- 1 Set measuring spoons
- 2 Teaspoons
- 2 Tablespoons
- 2 Forks—1 short, 1 long
- 2 Large bowl spoons
- 1 slotted or 1 wooden
- 1 Ladle
- 1 Turner with perforations or 1 Large spatula
- 1 Potato masher
- 1 Lifter for hot pans or vegetables
- 1 Hard wood meat cutting board
- 1 Meat slicing knife

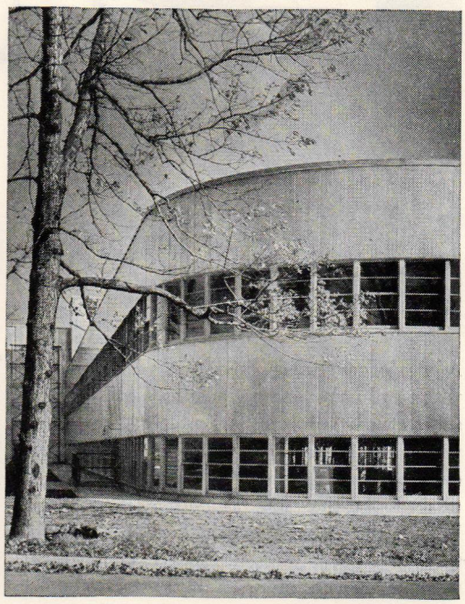
ALUMINUM SHEATHED PANEL, successor to wartime steel model, used in new laboratory.

Aluminum completely sheathes the new laboratory building of the Federal Telecommunications Laboratories at Nutley, N. J. First unit of a projected development on a pre-war golf course, this steel-framed structure employs the standard Robertson flooring system and Robertson Q-Panels for exterior walls. A wartime development, this wall panel has hitherto been externally sheathed in corrugated sheet steel. In this project, for the first time, it is sheathed in aluminum. The panel assembles into a rigid, completely weatherproof and insulated wall only 3 in. thick. It comes in a 2 ft. width in any length up to 25 ft. The exterior aluminum is permanently fixed to the corrugated steel backing, with a 1½ in. glass fiber mat between for insulation; while a specially-designed joint guarantees a quick, self aligning and vapor-proof seal in field assembly. By using steel panel floors and Johns-Mansville's Transite for exterior wall lining and interior partitions, construction throughout was dry and rapid.

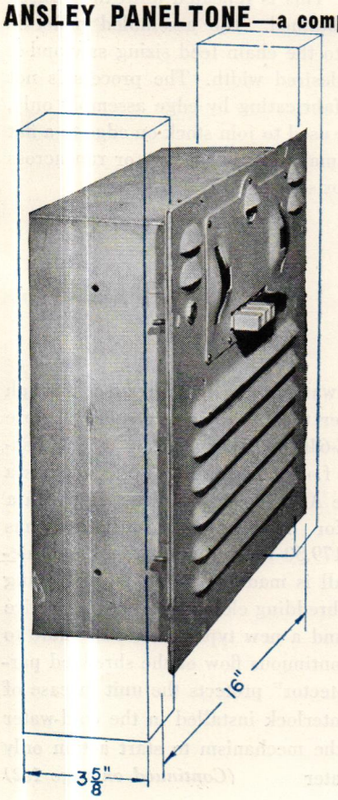


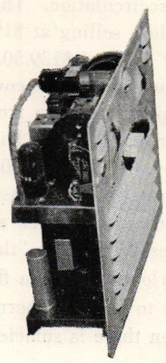
ALUMINUM FACED PANELS with Fiberglas insulation and steel backing (detail above) provide the Federal Telecommunications Laboratories with a rigid, weathertight, insulated wall only 3 in. thick. The attractive aluminum exterior requires no maintenance.





ANSLEY PANELTONE—a complete radio unit in compact 4½ inch steel cabinet—is easily installed in new or existing buildings.

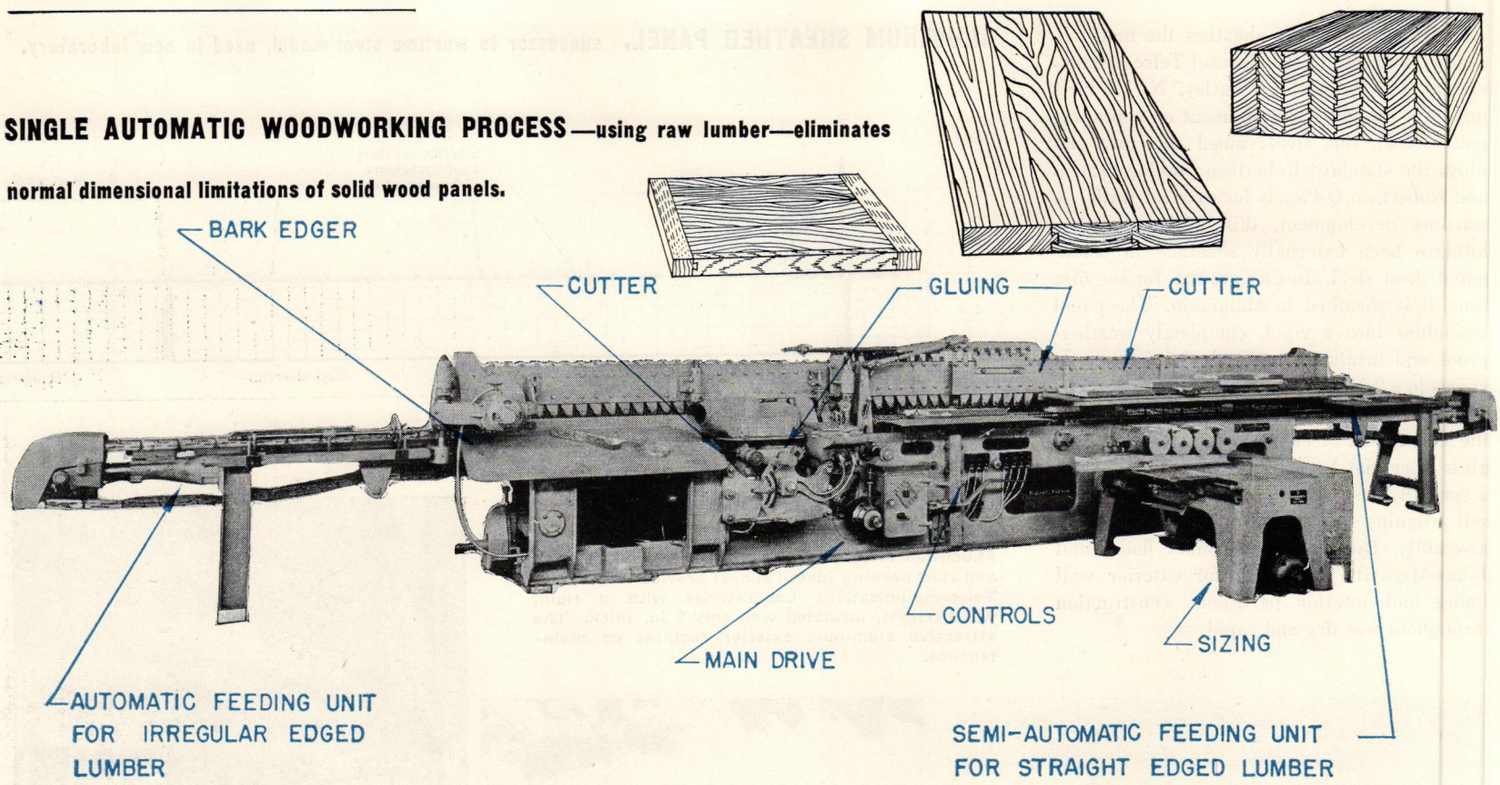




NATIONAL MODEL PANELTONE fits flush with the wall of any room. Only preparation of dimensioned wall opening and provision of 110 AC service is needed for installation in regular stud construction. Estimated installation cost for new construction is nil, for existing structures approximately $15.

The New Ansley Paneltone is a complete radio unit, capable of fine tone quality and reception, which comes complete in a compact panel for easy built-in installation. Installed flush with the finished wall, it provides a radio installation of modern appearance with a rich, true tone quality obtained by the infinite baffle area of the wall. The unit, housed in a steel case just 4½ in. deep, may be installed in the wall, bookcase or closet door, and is applicable to new or existing buildings. A space of proper dimensions in the wall between the studs, and provision of 110v, AC power service is all that is needed for installation. The unit comes prime coated, and the ⅛ in. steel face panel may be finished in any desired color after installation. Two models will be offered by the Paneltone Corp. of New York: the National, a 7 tube, AM set, and the International, a 17 tube, FM-AM set. Outside measurements of the National's mounting panel are 14 in. by 14 in. by 4½ in. This set, which is now in production, covers the standard broadcast band, has six station push buttons, extra heavy 6 in. speaker and 5 w. undistorted output. The International, which will go into production shortly, provides frequency modulation, standard broadcast and short wave reception. It is an eight push button system, has a heavy duty 12 in. high-fidelity speaker, 15 w. undistorted output and measures 15 in. by 26 in. with an over-all depth of 4½ in. Both units are prepared for the connection of a phonograph or wire recorder, and the addition of television. They meet all requirements and standards of the Board of Fire Underwriters. Special institutional installations will be made by equipping the Paneltone for multiple output operation so that 20 to 30 sets of earphones may be used with one unit.

SINGLE AUTOMATIC WOODWORKING PROCESS—using raw lumber—eliminates normal dimensional limitations of solid wood panels.



A single continuous operation which begins with raw lumber—straight or crooked, long or short, dressed or with bark still on—and ends with a "welded" wood panel of almost any desired thickness and width: all this is accomplished by the new Linderman Automatic Wood Fabricator. This machine automatically trims the wood, joins it, glues it and sizes it to dimensions ranging from ½ in. to 3 in. thick, from 10 in. to 16 ft. long and of any desired width. Applicable to wood panels for items such as ironing boards, table tops, doors, and house construction accessories, the process opens new possibilities for economical mass production of all kinds of articles from wood. The crux of the process is a double-tapered wedge dovetail joint, which automatically assembles two narrow pieces into one wider piece which is at least as strong as a solid piece of the same width. Lumber as thin as ½ in. may be joined with a single dovetail. Heavier thicknesses use one or more depending on the requirements of the product. In the manufacture of wide lumber which is to be resawed to thinner sections, dovetail joints may be located so that one or more will be left in each piece after resawing.

Developed by the Muskegon Machine Co., Inc. of Newburgh, N. Y., the Fabricator, is an evolution of earlier Linderman machines and involves merely a rationalization of well-tested principles. It is operated by three men—one at each end and a "key" operator at the center. In operation, two pieces of lumber are fed in from opposite ends of the machine. As the lumber moves into the machine, cutters trim the boards and cut tapered dovetail tongues and grooves in the edges. Boards moving in from one end are tongued, while boards from the other end are grooved. As the boards approach each other at the center, the grooves and tongues are automatically spread with glue, slid together and solidly locked. The jointed assembly (which the Army has rated as being as strong as a solid piece of wood) is removed at the center of the machine. To achieve a wider finished panel, the jointed boards are returned to one end of the machine to meet a single board coming from the opposite end. This is repeated until the desired width is obtained. The assembled panel is passed on to the chain feed sizing saw and is ripped to desired width. The process is not limited to fabricating by edge assembly only, but may be used to join stock on edge to a flat piece (for making stock mold) or run across the grain for such uses as flooring.

BUILDING REPORTER

AUTOMATIC DISHWASHERS AND GARBAGE DISPOSAL UNITS to cost less than 1942 models.

The new 1946 automatic Disposalls, dishwashers and electric sinks, incorporating many improvements in appearance and operation, will cost from $20 to $70 less than 1942 models. The dishwasher, simple in its newly-developed, fully automatic "single touch" control, reduces to one step the 14 operations required in the prewar model. When in use, the dishes are stacked in the unit, the detergent cup is filled, cover closed and the control turned on. The automatic dishwasher then pre-rinses, washes and double rinses the dishes, and automatically raises the dishwasher lid so the clean dishes can be air dried. A new cover lock prevents the machine's starting when the cover is open, and it cannot be opened while the machine is in operation. The motor is completely enclosed to prevent the entrance of water, and all water passes through a perforated metal strainer to remove food particles before its recirculation. The BE-646, a 24 in. cabinet model dishwasher, selling at $194.50 f.o.b. factory before the war has a new price of $139.50. The AE-646, a dishwasher unit with a white porcelain cover for custom-built installation, has dropped in price from $179.50 f.o.b. factory to $124.50 delivered. The new Disposall is made of a new longer-lasting alloy. It features a finer shredding element for more effective disposal of food wastes, and a new type of strainer plate to assure a more even and continuous flow of the shredded particles. A built-in "thermotector" protects the unit in case of overloading, and a flow interlock installed in the cold-water line to the sink permits the mechanism to start action only when there is sufficient water *(Continued on page 162)*



ACACIA MUTUAL LIFE INSURANCE COMPANY, WASHINGTON, D. C., SHREVE, LAMB & HARMON, Architects

Snead MOBILWALLS

In arranging interior subdivisions for commercial structures, even the most careful planning cannot accurately anticipate requirements beyond the most immediate future. That's why Snead Mobilwalls have been specified for so many modern office and factory buildings.



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With Snead Mobilwalls interiors can be rearranged quickly and inexpensively to meet changing demands as they occur. Changes can generally be effected overnight by ordinary labor without dirt, mess or paint, and without interrupting routine. All parts are reusable without waste.

The monumental office building of the Acacia Mutual Life Insurance Company was equipped with Snead Mobilwalls many years ago. Because of the inevitable rearrangements required by this fast growing institution, the extreme flexibility of Snead Mobilwalls has paid handsome dividends by permitting changes to be made quickly and economically.

Snead engineers will gladly cooperate with you in preparing interior plans and specifications without cost or obligation. Write, phone or wire.

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to insure complete flushing away of all food particles. Model FA-3 Disposall, manufactured to fit all standard 3½ in. drains, will cost only $79.50 delivered. All 1946 prices include delivery to any place in the U. S., and a one-year warranty. They are for standard, 115-v., 60 cycle units, equipped with ¼ h.p. motors.
Manufacturer: General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.

PACKAGED STEEL CASEMENT WINDOW for residences. This new factory-fitted, residential window package includes the steel casement, storm sash and screen, glass, wood casing, outside trim and hardware. Complete installation takes but a few minutes. Frames are bonderized for protection against rust, dip-painted in a special primer and baked. Vents operate easily, not warping, swelling or sticking. The factory-fitted storm sash and screens are easily installed from the inside. The storm sash fits on the casement itself, and may be left on the year around to provide extra insulation against heat and cold. Screens need not be removed in winter; however, they are interchangeable, thus eliminating need for marking or numbering, for those who prefer to remove them.
Manufacturer: Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich.

WOOD WINDOW with removable sash is easily installed. A new double hung window unit with removable sash, "pressure seal" weatherstripping and other features of interest to contractors and builders, has been announced for early manufacture. Wedging action of the concealed pressure strips holds the sash securely in any position, and a simple operating mechanism frees the sash for easy raising and lowering. According to the manufacturer, the window is expected to appeal because of its exceptionally easy installation. Sash comes complete with weatherstripping and operating mechanism installed. Placement in the opening is all that is necessary, no tools being required. The frame is semi-assembled and includes a special inside stop and stool. In many cases no other trim is needed. The removable feature also permits easy cleaning and inside handling of screens and storm sash. The new Andersen Pressure Seal Window Unit will be furnished in two sash styles, the divided light "Colonial" style and the modern horizontal bar style. Sizes conform to the modular standards.
Manufacturer: Andersen Corp., Bayport, Minn.

NEW FLOOR COVERINGS feature utility flooring, backing material for Embossed Linoleum, new linoleum patterns. A new flooring product, Accoflor; a new development in backing material for Standard Guage Embossed Linoleum called Armofelt; and 24 new linoleum patterns are announced by the Armstrong Cork Co. as result of extensive wartime research. Accoflor is a utility type flooring comprised of a mastic composition bonded to an asphalt-saturated felt backing. Designed for general use in a wide variety of commercial and light industrial areas, either on or above grade level, it possesses thermoplastic qualities. Thus surface damages such as cuts and indentations, normally smooth out under regular traffic. It will be available in black and red, in rolls one and two yards wide. Armofelt, the new backing material, is a fresh fibre felt that has been processed with a special clear saturant instead of the traditional asphalt. It is resilient and flexible and will not soil woodwork during installation. It provides a removable safety-back for Standard Embossed, a feature which heretofore was not available. The 24 new patterns of Armstrong's Linoleum, Quaker and Standard Rugs and Floor Coverings are designed for versatility and are adaptable to modern or period interiors and to residential or commercial installations.
Manufacturer: Armstrong Cork Co., Lancaster, Pa.

THATCH ROOF SHINGLE has wood grain embossed surface. A new version of their Colonial Thatch Shingle has been introduced by the Ford Roofing Products Co. Known as the Textured Colonial Thatch, it has a wood grain embossed surface in addition to the heavy shadow lines of the Colonial Thatch shingle. It is available in a number of attractive colors and blends.
Manufacturer: Ford Roofing Products Co., 111 W. Washington St., Chicago, Ill. *(Continued on page 166)*

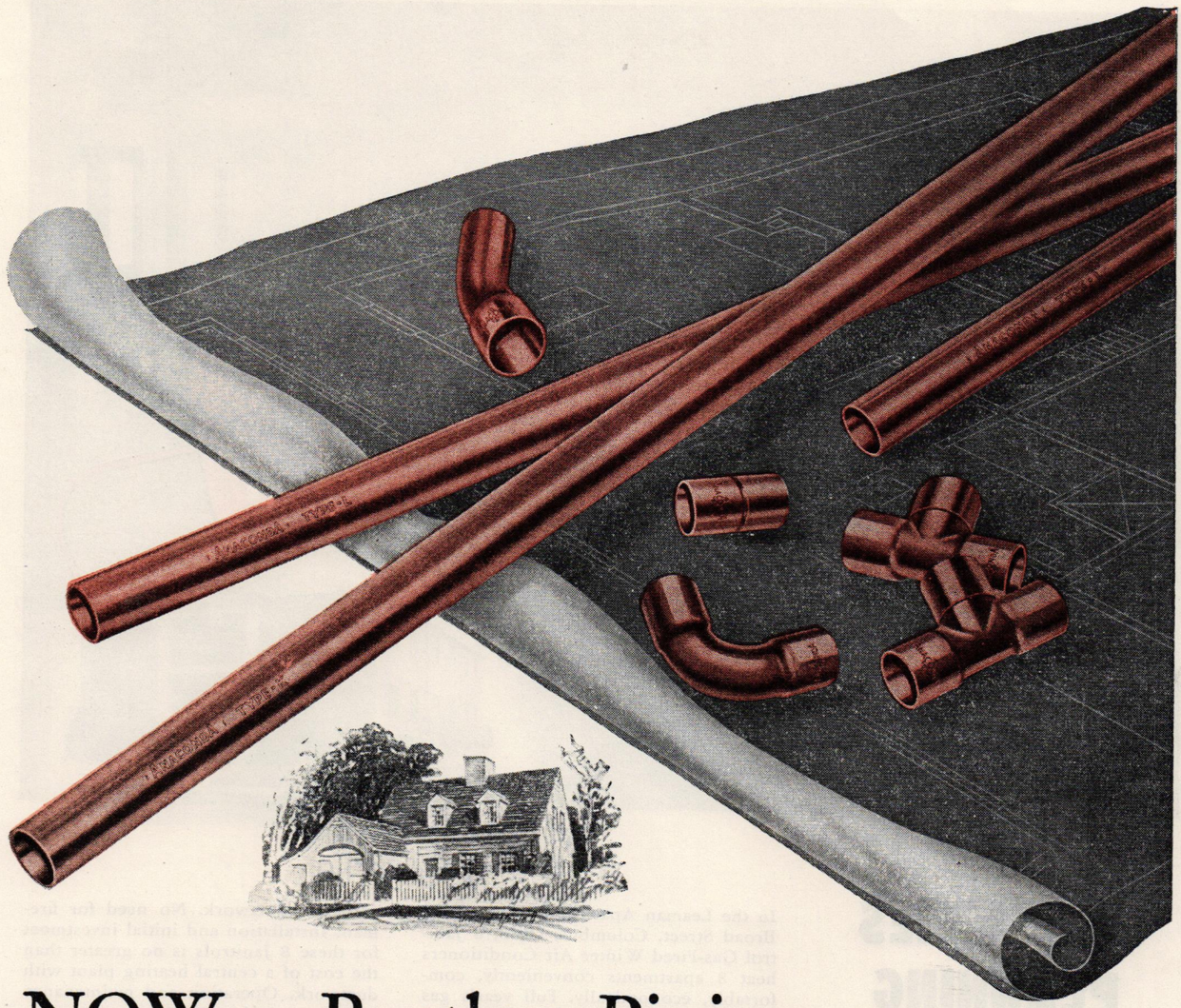
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Reg. U. S. Pat. Off.



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*** Decorative Mouldings of Extruded Aluminum Alloy and Stainless Steel.**

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Columbus 16, Ohio



NOW... Rustless Piping for even the *Smallest Home!*

TODAY, there is no reason why any new home, no matter how modest, should be equipped with water lines that rust. For Anaconda Copper Tubes assembled with Solder Type Fittings can be installed at a price competitive with rustable pipe.

Such a system provides a clean supply of rustless hot and cold water, and guards against trouble and premature piping replacement.

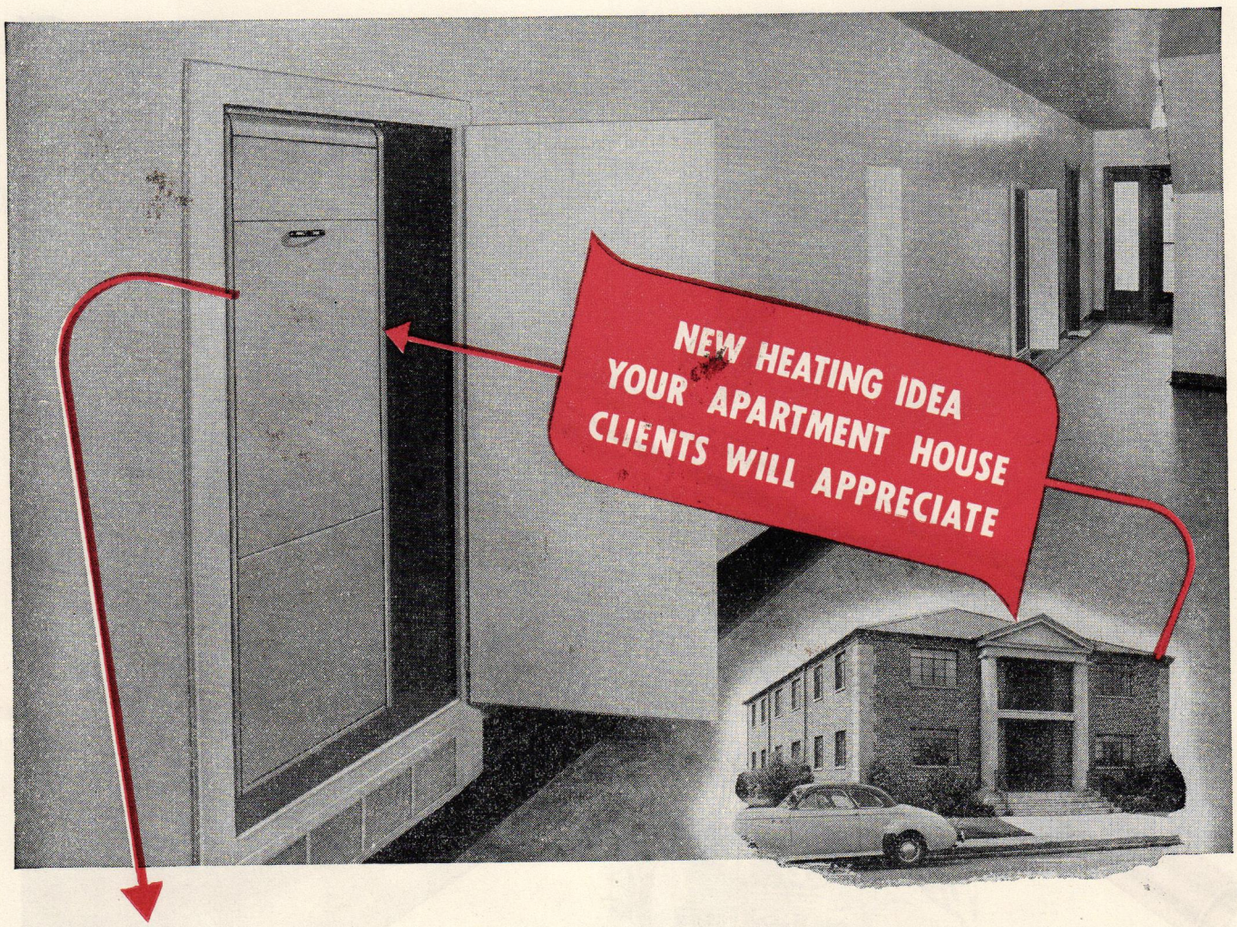
Anaconda Copper Tubes are made from specially deoxidized 99.9+% pure copper. They are furnished soft in sizes up to and including 1¼" in 30, 45 and 60-foot coils; also hard and soft in 20-foot straight lengths. Larger sizes are supplied hard or soft in 20-foot straight lengths only.

In addition to their use as water lines, Anaconda Copper Tubes provide long, economical service for heating lines, garden and lawn sprinkler systems and as tank-to-oil-burner, bottled gas and other connections.

For detailed information, write for Publications B-1 and C-2. 4656

ANACONDA
from mine to consumer

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SIMPLIFIES PLANNING AND CONSTRUCTION

In the Leaman Apartments, 3181 West Broad Street, Columbus, Ohio, 8 Janitrol Gas-Fired Winter Air Conditioners heat 8 apartments conveniently, comfortably, economically. Full year's gas bills for both heating and cooking averaged only $39.91* for each apartment. Each unit consists of living room, dinette, kitchen, bath, and two bedrooms . . . tenant pays his own gas bill . . . hot water is supplied by the management.

Check these advantages:

INDIVIDUAL TEMPERATURE CONTROL. Each apartment resident regulates his own Janitrol to suit himself. Automatic controls keep temperature constant.

ECONOMY. Heat is generated right on the spot where it is used. No loss through extensive ductwork. No need for fireman. Installation and initial investment for these 8 Janitrols is no greater than the cost of a central heating plant with ductwork. Operation and maintenance cost is vastly less.

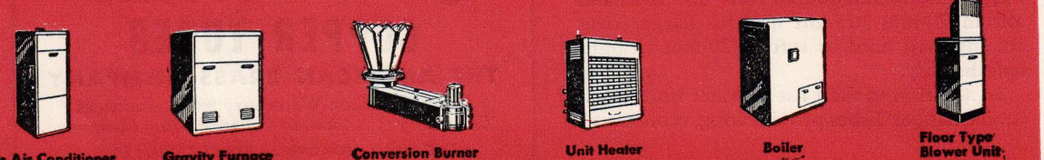
SIMPLIFIES PLANNING OF BUILDING. Furnace and fuel storage rooms are eliminated. Construction is simplified, space which would be used for ductwork is conserved.

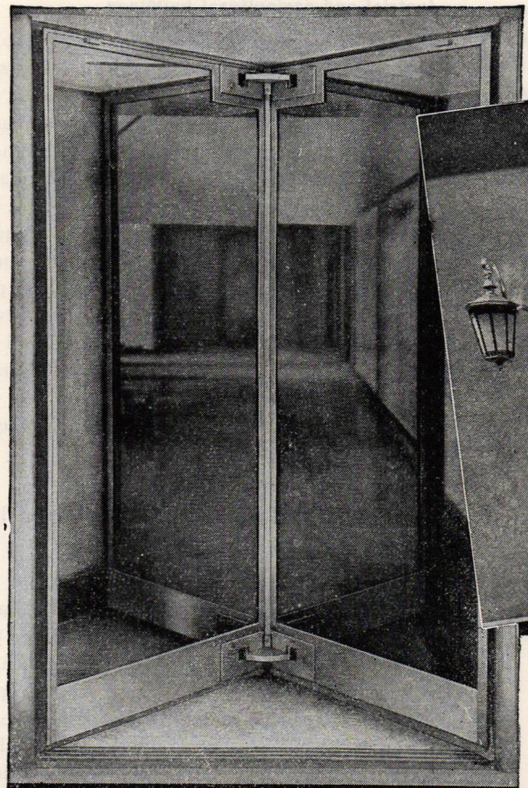
LESS WORK FOR CUSTODIAN. No coal, no ashes, no furnace-fixing.

There are many similar successful Janitrol installations of this same type. Write for full information and performance data on this modern heating method. *Surface Combustion Corporation, Toledo 1, Ohio.*

**Natural Gas Average Rate — 56 cents per 1000 cubic ft.*

Janitrol GAS-FIRED HEATING EQUIPMENT



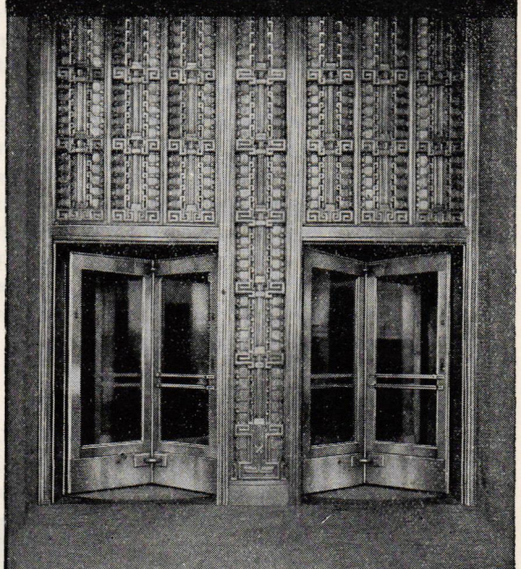


GB REVOLVING DOORS AT ROCKEFELLER CENTER

More than 60 GB revolving doors have been installed to date in the beautiful buildings of Rockefeller Center.



Entrance to STOUFFER'S RESTAURANT in New York City. Doors and metal work by General Bronze.



U. S. POST OFFICE AT PHILADELPHIA, PA.

Revolving doors and metal work by General Bronze.

GB ALL METAL REVOLVING DOORS

GB revolving doors are a worthy addition to your finest buildings. These handsome, easy-operating doors embody features developed in thirty-five years' experience in fabricating non-ferrous metal products for the building industry. They are engineered to meet modern requirements and can be detailed to harmonize with the architectural treatment of the entrance.

GB revolving doors have been specified by many of the country's foremost architects for their finest buildings. Hundreds of installations in notable buildings all over the United States are constant reminders of their excellence. As you design new structures or the remodeling of old ones plan to use GB revolving doors. Write today for our catalog or consult Sweet's.

GENERAL BRONZE CORPORATION

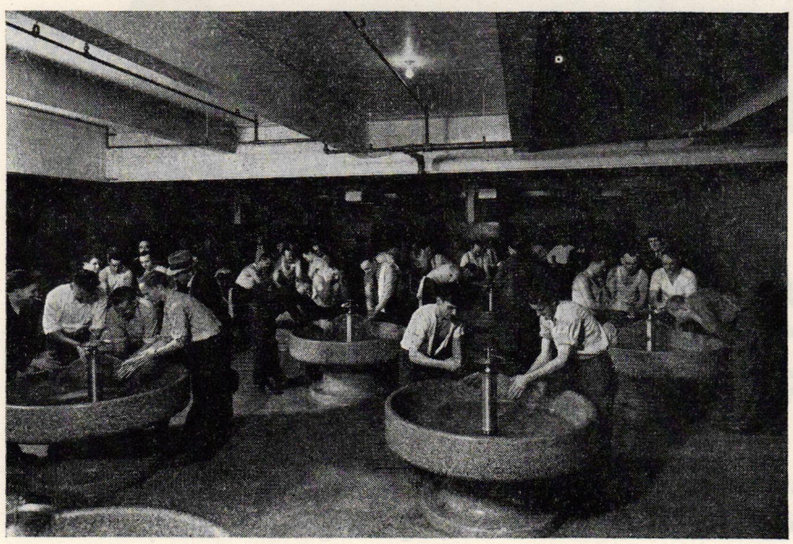
34-19 TENTH STREET LONG ISLAND CITY 1, N. Y.

ARMY E NAVY

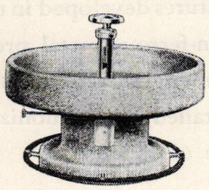
SIX CONSECUTIVE ARMY-NAVY "E" AWARDS

TRANSPARENT WATERPROOF COATING improved.
New and improved Ranetite No. V Transparent Waterproofing combines an aluminum and calcium stearate base with the formula of the former product. The new material dampproofs, waterproofs, and prevents discoloration on above-grade stone, brick or stucco walls. It does not change the texture of the surface to which it is applied, and being colorless does not show after application. Sealing out dampness, it also destroys alkali deposits often found on outside wall surfaces. It is applicable only to surfaces which have not been painted or received an oil coating, with one gallon coating about 400 sq. ft. At least 3 coats are recommended for full penetration of bricks and mortar joints. Ranetite No. V comes ready for use, and application may be made with brush or spray. *Manufacturer:* Ranetite Manufacturing Co., Inc., 1917 South Broadway, St. Louis 4, Mo.

BE SURE TO SPECIFY—



Modern, Sanitary Bradleys



Full Circle Type

Your clients look to you for recommendations in building, remodeling and modernizing that will help them operate their plants with maximum efficiency and utility. Specifications that include the installation of time, space and money-saving Bradley Washfountains fulfill this obligation with professional foresight.

One Bradley serves 8 to 10 persons simultaneously, from a central sprayhead,—and saves the space that would ordinarily be needed for 8 to 10 "single-person" wash basins. Water consumption is cut, workers' time is saved, and piping connections reduced by 75%. Of equal importance, sanitation is promoted and employee morale is boosted.

A few of the many recent Bradley installations specified by leading architects include: 18 Washfountains for Dictaphone Corporation; 18 for National Screw of Cleveland; 6 Washfountains plus 3 Bradley Multi-Stall Showers for Youngstown Sheet and Tube; 15 for American Viscose; 13 for Pennsylvania R. R.; 14 for Benrus Watch; 24 for Dodge.

Bradley Washfountain Consultants will be glad to consult with architects and building engineers on prospective washroom installations. "Washroom Planning" Booklet contains a score of typical washroom layouts for factories, schools and institutions,—copy on request. BRADLEY WASHFOUNTAIN CO., 2235 W. Michigan Street, Milwaukee 1, Wisconsin.

BRADLEY washfountains

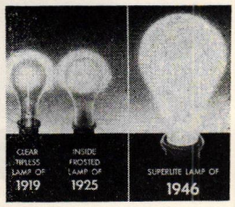
Write today for New Booklet "Washroom Planning."



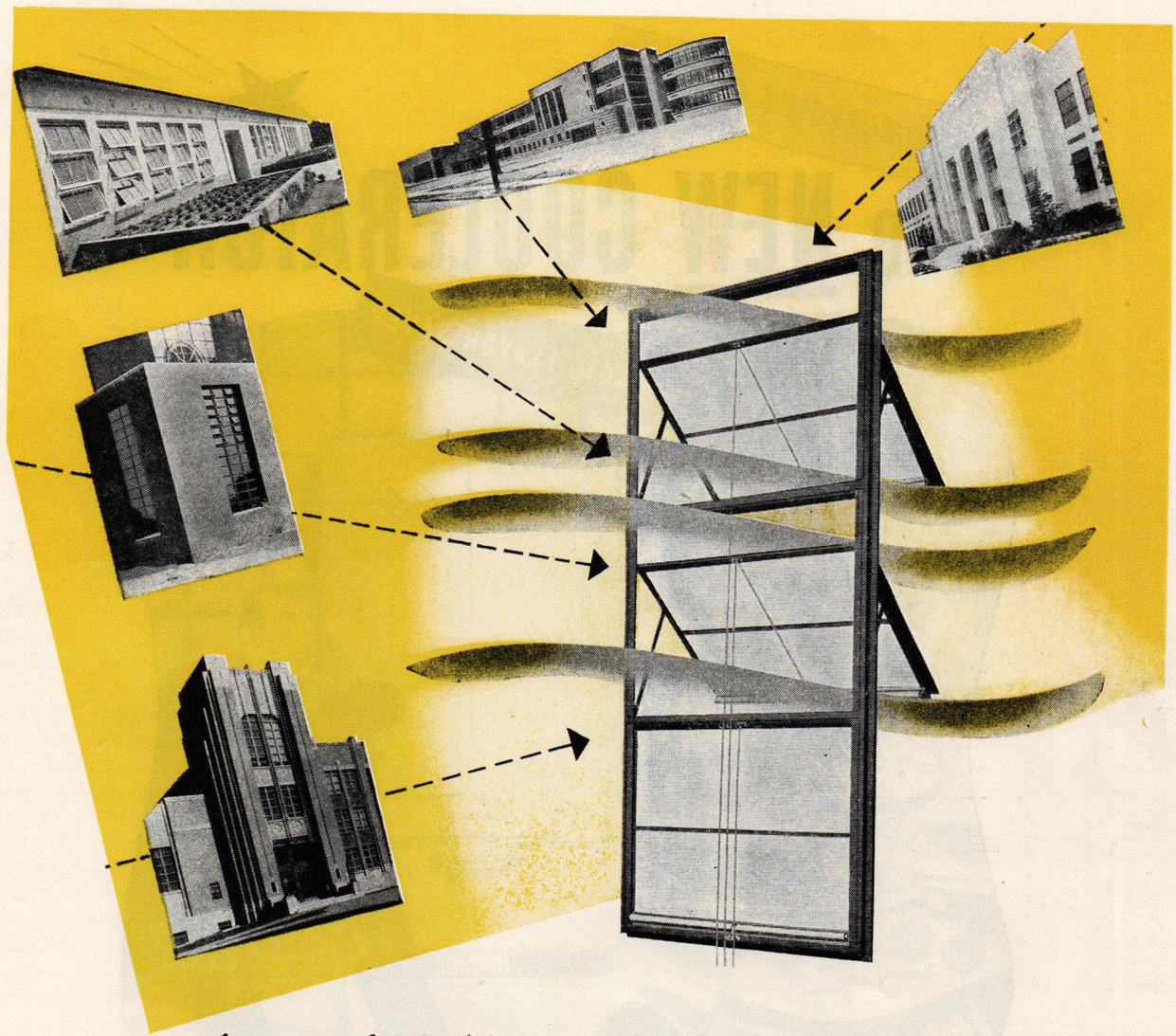
PROTECTED METAL roofing and siding material for industrial and agricultural buildings.
Plastipitch protected sheets consist of flat, corrugated or V-crimp steel sheets whose surfaces and edges have been treated with Plastipitch, a compound perfected by Koppers Co. The permanent adherence of the surface treatment to the metal makes the material corrosion, chemical and heat-resistant. After the Plastipitch coating the sheets are provided with additional surfaces to give added protection. The treated sheets can be easily fabricated without special equipment and can be bent without impairing the coating because of its toughness and elasticity. Upkeep costs such as painting and replacement are eliminated. Developed as a postwar building product for roofing and siding on industrial and agricultural buildings, it is suitable for gutters, ventilators, flashings, ducts, etc.
Manufacturer: Tar & Chemical Division, Koppers Co., Inc., Koppers Bldg., Pittsburgh, Pa.

FLUORESCENT LIGHTING UNITS provide light where needed without fixed outlets.
Portable, useful and decorative Add-A-Light Fluorescent lighting units provide any desired amount of light wherever it is needed by the simple addition of another plug-in unit. Made in 24 in., 48 in., and 96 in. lengths, Add-A-Lights have a plug connection in one end and a plug receptacle in the other. The back of the channel section is provided with openings so that the units can be mounted on the wall with simple picture hooks or on the ceiling with screws which slide into slots that grip firmly. These also provide easy dismounting. To create a line of light either horizontally or vertically, the unit is mounted and connected into the nearest convenience outlet by means of the furnished white attachment cord. Without any additional electrical connections, each succeeding unit is plugged in the receptacle of the preceding unit. This procedure continues to whatever length is desired. Five easily mounted adaptations of shields and reflectors, available in sizes corresponding with the units, complete the fixture. Add-A-Lights can easily be shifted to suit decorative schemes, or moved to a new home. Their use provides available light wherever it is needed, whether it be over or beside windows, over bookshelves, paintings, davenports, fireplaces, in kitchen work areas, closets and attics, or for cove or continuous wall lighting in living rooms. Add-A-Light also has application in the commercial field or for theater and hotel lobbies.
Manufacturer: Moe-Bridges Corp., Sheboygan, Wis.

ELECTRIC LIGHT BULBS diffuse glare point.
A new incandescent bulb is now produced by Wabash Appliance Corp. called a white light-conditioning bulb, its inside surface treated to diffuse the central glare point caused by the concentrated filament. This breaks up the direct raw light rays into millions of softer "counter diffusing" rays that glow evenly over the entire bulb surface without sacrifice of visible illumination. Having been well tested during the war years, shipments are now being diverted to civilian outlets. Ten sizes from 10 to 200 w. will be made in 115, 120, and 250 volts, with four sizes from 25 to 150 w. in 220, 230, 240 and 250 volts.



Manufacturer: Wabash Appliance Corp., 335 Carroll St., Brooklyn, N. Y.
(Continued on page 170)



for ample light and draft-free ventilation in a wide range of structures . . .

The Donovan Awning Type Window offers the architect a wide range of opportunities for design distinction in window areas in schools, hospitals, auditoriums, and similar structures.

—and assures for these buildings unique advantages in lighting and conveniently controlled ventilation.

The Donovan design completely eliminates all unsightly exposed connecting arms, shafts, racks, etc. The awning principle of the open ventilators permits a free flow of air in inclement weather. Fully opened, the windows afford approximately 100% ventilation. Ventilators operate in unison, either by manual control or completely concealed mechanical operators, as desired. In manual operation the opening of the sill ventilator automatically and simultaneously opens all other vents, however by means of a special automatic disengaging mechanism, the upper ventilators may be left open and the lower ventilator closed.

Write for illustrated manual giving complete mechanical details of the Truscon Donovan Awning Type Steel Window.



TRUSCON STEEL COMPANY

YOUNGSTOWN 1, OHIO • Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Steel Windows and Mechanical Operators . . . Steel Joists . . . Metal Lath . . . Steeldeck Roofs . . . Reinforcing Steel . . . Industrial and Hangar Steel Doors . . . Bank Vault Reinforcing . . . Floodlight Towers . . . Bridge Floors.

STAR OF TOMORROW'S KITCHEN

The NEW COOLERATOR

★ WITH THE MAGIC FLAVOR SAVER

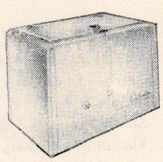


We will be glad to furnish you with complete specifications on all Coolerator products

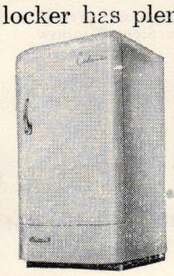
Yes, the New Coolerator with the MAGIC FLAVOR-SAVER . . . BIG 40-LB. FROZEN FOOD LOCKER . . . and NO DEFROSTING PROBLEMS is what every woman wants in her postwar kitchen! The Magic Flavor-Saver actually controls humidity, odors, temperature and eliminates all defrosting problems! The big frozen food locker has plenty of space for a week's supply of frozen foods and meats.

NEW HOME FREEZER

The day when you'll be able to store fresh frozen fruits, vegetables, and meats is just around the corner. Be patient! Wait for Coolerator's big Home Freezer—priced to fit your budget!



Coolerator



NEW ICE-CONDITIONED REFRIGERATOR

For those who prefer ice, tomorrow will bring the wonderful new Ice-Conditioned Coolerator. Its 4-way circulation keeps fresh foods fresh longer—always plenty of pure, taste-free ice!

The Coolerator Company, Dept. BA, Duluth 1, Minnesota

She'll love you for this!



The crowning touch of style-approved Cabinet Hardware by STANLEY!

This new line of Stanley Cabinet Hardware was styled by nationally noted industrial designers. Before they put a pencil to paper, these designers studied household cabinet hardware needs from A to Z. They considered functional efficiency as well as beauty. They designed ample finger room into latch pulls, pulls and knobs.

Added to the work of the designers were the results of years of research and test by the Stanley Engineering department. The result: a line of cabinet hardware that is smoother working, longer lasting and easier to install . . . and by all odds the most beautiful.

There is a style and finish to please every taste. There is a type and price to fit every budget. The moment you see it, you will realize that here, at last, is a line of cabinet hardware that will "click" with homemakers the moment *they* see it. Write for descriptive folder showing the complete line of Stanley Cabinet Hardware. The Stanley Works, Cabinet Hardware Division, New Britain, Conn.

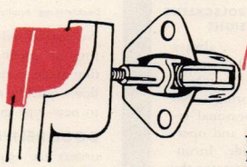
STANLEY

Trade Mark

Cabinet Hardware







New! Self-fitting latch—

Pat. Applied For

Unique new "trigger" latch has a friction sleeve which adapts itself automatically to doors from 3/4-inch to 1 1/8-inches thick. A Stanley "exclusive"!

New! Jewel-like Plastic Inserts—

Latch thumb-pieces molded of sparkling, durable plastics — red or black — give modern beauty to this hardware.



SUN AND HEAT LAMP combined in single unit.

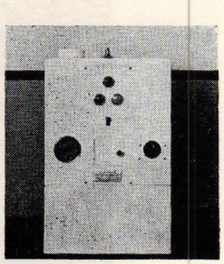
Select-o-ray, a new dual lamp unit resembling a streamlined automobile headlight, delivers ultra violet rays from one end and infra red from the other. The fixture combines for the first time the heat effect of infra red and the sun tanning effect of ultra-violet. Equipped with a two-way three-position switch, the user may select either warming or tanning rays. The compact, enamel lamp unit, fitted in a chromium mounting, is adaptable as a floor or table model. The frame can be extended to a height of 63 in. or lowered to 40 in. By unscrewing the upper portion from the sliding tube of the mounting the fixture can be readily changed to a table model. It is easy to use and easy to store, weighing only 12 lbs. Operating life of the lamps is long, the heat lamp having an excess of 5,000 burning hours, and the sun lamp providing more than 400 applications.



Manufacturer: Lighting Div., Westinghouse Electric Corp., Cleveland, Ohio.

AIR CONDITIONING AND STERILIZATION UNITS utilize germ killing dehumidifying chemical.

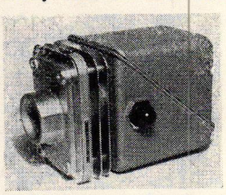
A new line of industrial and commercial air conditioning and air sterilization units have been developed by Research Corp. and will shortly be produced by the Rogers Diesel and Aircraft Corp. The air conditioning units, operating on the principle of chemical dehumidification, promise a saving in operation costs over the conventional refrigeration type, according to the manufacturer. This saving is achievable because humidity control and temperature controls are separate. The chemical used to remove the excess moisture from the air—triethylene glycol—has a germicidal effect on air-borne bacteria. Tests conducted during the war in cooperation with army and navy authorities, established the fact that the presence of a minute quantity of this chemical vapor in the air reduced sharply the incidence of pneumonia, streptococcus, influenza and the common cold. Therefore, vaporizing units using triethylene glycol open a new approach to the control of air-borne bacteria. The unit illustrated was used in army and navy hospital tests and results indicated that complete air sterilization is possible. These units operate on ordinary house current and the glycol vapor produced will sterilize the air in an entire building. Among other models in the line is a small table model for the home. Selling for under $50, it will render comparatively germ-free the rooms of a residence, office or hospital.



Manufacturer: Rogers Diesel and Aircraft Corp., 1120 Leggett Ave., New York 20, N. Y.

PHOTOELECTRIC FLAME-FAILURE SAFEGUARD provides protection for industrial and commercial burners.

The Fireye Flame Failure Safeguard Type F18T, for use on oil and pulverized coal burners, instantly cuts off fuel and sounds an alarm should burner flame fail. Housed in an aluminum case the unit includes a phototube and amplifying system. The control is mounted directly on the furnace wall with the front of the unit located within 5 ft. of the flame. It is so alligned that the photoelectric cell observes the flame through a 2 in. pipe connection which also serves as a support for the equipment. Control design makes possible simplified installation. A pyrex filter keeps the equipment dust-tight and is mounted on a hinged shutter which permits cleaning without shut-down. A heat-absorbing filter in the lens system as well as an efficient baffle arrangement protects Fireye from radiated heat. Other features include a pilot light which can be viewed through an angle of 180°, and a time delay element which prevents the relay from dropping out during transient flame disturbances. Fireye operates on 115/230 v. 50/60 cycle, AC, and ambient temperature range is 32° F.—150° F.



Manufacturer: Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.

(Continued on page 174)

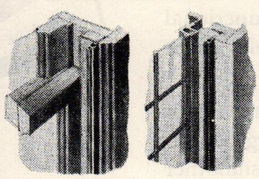


NOW AVAILABLE

the original inside screens that roll up and down like a window shade

ROLSCREENS in a house are a "trademark" of good planning. They are a year 'round advertisement for the architect who specifies them. They help to keep a house up-to-date and protect its salability over the years. A big part of your business is selling CONVENIENCE. ROLSCREENS help you to do it like no other window appurtenance.

EASY TO INSTALL
ON ALL TYPES OLD AND NEW WINDOWS



Double-Hung Application Casement Application

No special mill work, no special fitting or cutting required. Installation made to either of the above windows quickly and easily . . . thanks to new type guide channels.

GOOD DELIVERIES — ROLSCREEN orders are being filled and shipped with reasonable promptness. Materials are back to prewar quality standards. On your next new or remodeling job, include ROLSCREENS. WRITE for interesting FREE literature and planning information — or see ROLSCREEN Data in Sweet's.

CONVENIENCE of ROLSCREENS SELLS ON SIGHT

Once in place . . . always in place. That's Rolscreens! No putting up! No taking down! No storing! No painting! No seasonal repairs! Installed and operated on the inside. Inconspicuous. They preserve the beauty of clear, sparkling glass. For *all* types of windows — both old and new construction.

10 YEAR GUARANTEE

This is your assurance that your clients will be satisfied and enthusiastic about ROLSCREENS over the years.

☆ Pella ROLSCREENS ☆

ROLSCREEN COMPANY • PELLA, IOWA

Made by Makers of Famous Pella Venetian Blinds and Casement Windows

GET THE RIGHT ROOF FOR ANY JOB FROM ONE SOURCE!



● No detours from a straightforward solution, no substitutions necessary—if you specify Ruberoid! We make all types of built-up roofing, in specifications to meet any project you may have in mind —Asbestos Felt and Asphalt, Coal Tar Pitch and Tarred Felt, or Asphalt Felt and Asphalt.

When desired, Ruberoid Built-up Roofs are bonded for 10, 15 or 20 years, depending upon specification used.

Ruberoid Approved Roofing Contractors are located in all parts of the country, ready to give practical assistance in planning and executing your next built-up roof—assistance that's based on long experience and backed up by the full resources of a complete line of materials. For centralized responsibility, for quality and performance, for *planned* results—call in a Ruberoid Approved Roofer today!

The **RUBEROID** Co.

***Executive Offices:* 500 Fifth Ave., New York 18, N. Y.**

Asphalt and Asbestos Building Materials . . . Thermal Insulations

Friends are telling friends about their wartime experiences...



"ALL THROUGH THE WAR OUR SERVEL NEVER GOT NOISY!"

"OUR SERVEL NEVER GAVE US A MOMENT'S TROUBLE!"

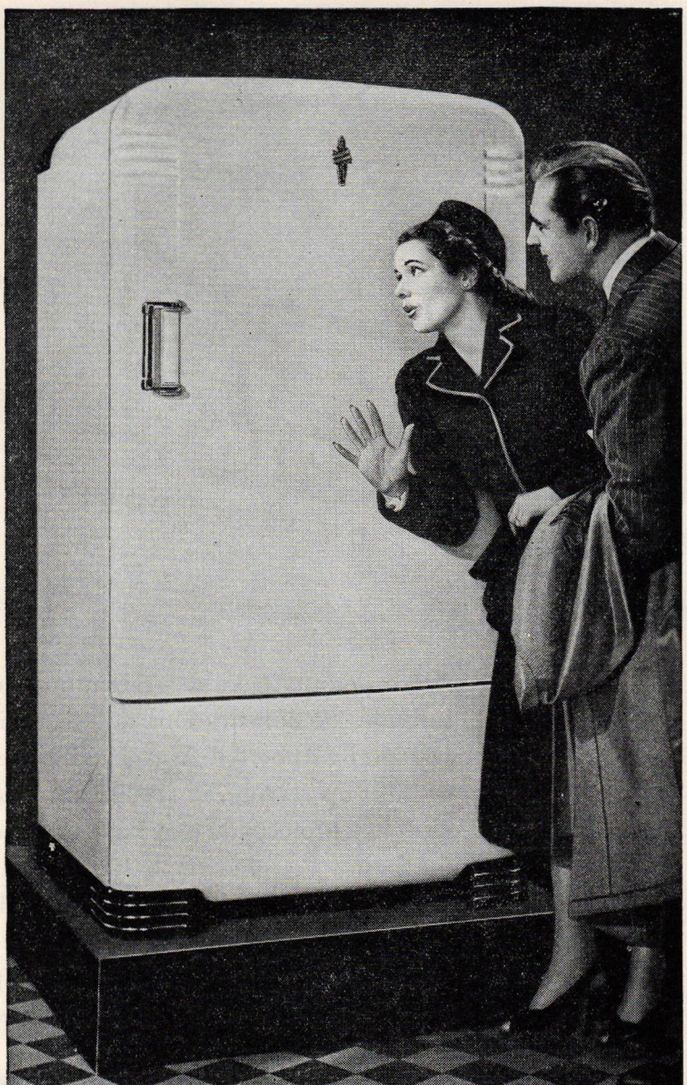
"WE KNEW WE COULD COUNT ON GAS COMPANY SERVICE!"

NO WONDER MORE AND MORE FAMILIES PREFER GAS REFRIGERATION!

SERVEL OWNERS are enthusiastic about the silent, dependable refrigeration they enjoyed all through the war. And they're telling their friends and neighbors. That's why thousands of families who are planning on a new refrigerator say, "No more refrigerator worries for us. This time *we're* getting a Servel!"

Gas Refrigeration's outstanding wartime performance is the result of Servel's basically different method of operation. This modern refrigerator freezes with *no moving parts*. A tiny gas flame circulates the refrigerant that produces steady cold and sparkling cubes of ice. There's nothing in the freezing system to get noisy, wear, or need costly repairs. That's why you can recommend Servel to your clients with confidence. It's the refrigerator that "stays silent, lasts longer."

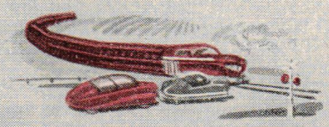
Important: Be sure to provide outlets for Servels in your current designs. For installation data and complete information, consult Sweet's Catalog or write to Servel, Inc., Evansville 20, Indiana.



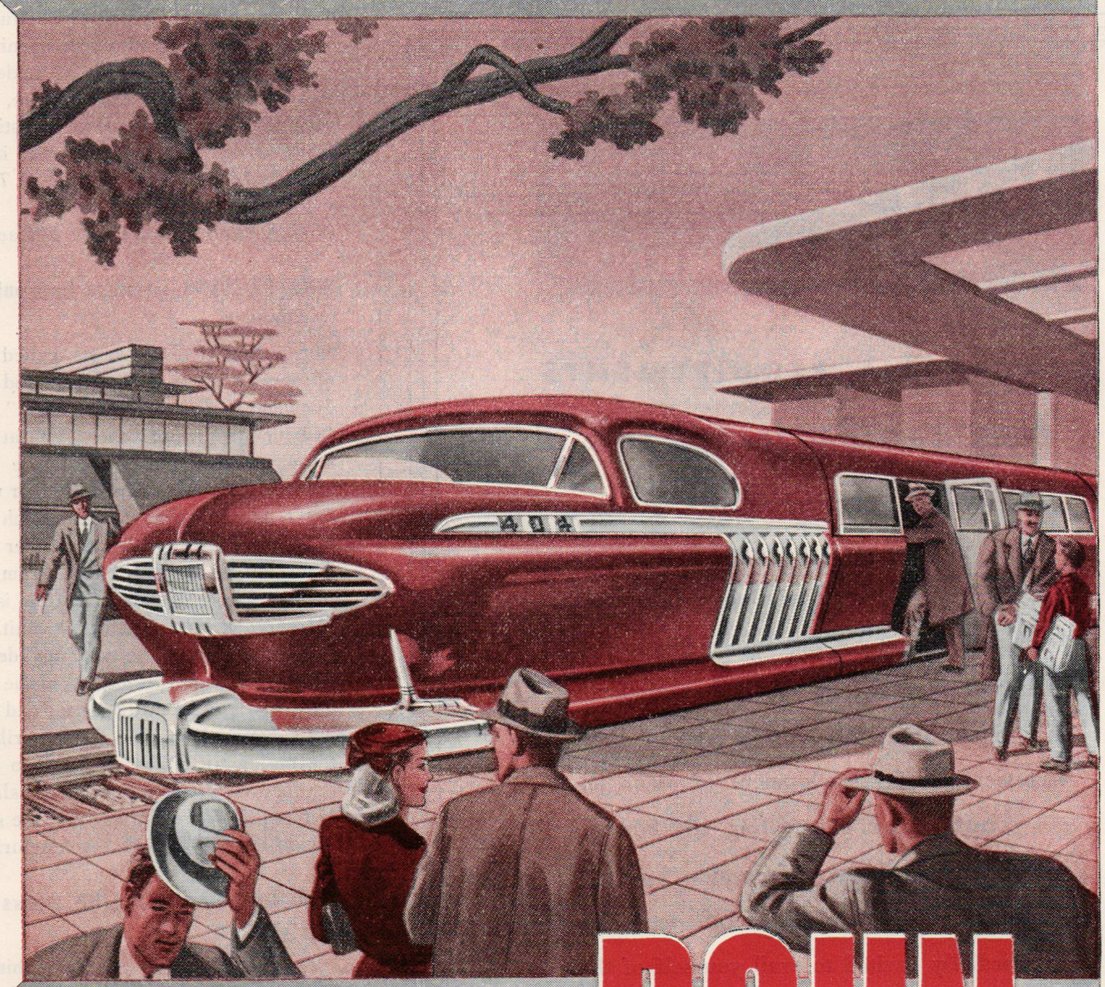
STAYS SILENT
LASTS LONGER

Servel GAS REFRIGERATOR

future commuter



Commuting by train to and from work is part of the busy life of many of the dwellers in America's larger cities. The designers for the future tell us that this may be the kind of train in which they'll skim along the rails. The light alloys—aluminum and magnesium—will play a prominent part in its construction and equipment, as they will in countless other new products. If you use—or can use—aluminum or magnesium in the things you make, Bohn engineers would like to talk to you with a view to serving your future requirements.



BOHN

BOHN ALUMINUM AND BRASS CORPORATION
GENERAL OFFICES—LAFAYETTE BUILDING—DETROIT 26, MICHIGAN

Designers and Fabricators—ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS

CALCULATING DEVICE measures radiation for steam and hot water heating systems.

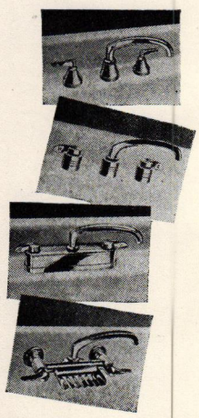
The Heat-O-meter eliminates tedious figuring usually necessary to determine the correct amount of radiation for steam and hot water heating systems. It successfully and easily calculates the answer, eliminating subtractions, divisions, complicated multiplication and the use of formulas. Usable by persons without previous technical training, the unit consists of three concentric celluloid printed discs. The large one, 6¼ in. in diameter is printed in red on both sides. The other two discs, ⅝ in. smaller, and printed in black, are fastened to the center of the large disc, and have a cut-out V-section. Computations are made with the large black numbers along the edge of the V-shaped opening and the red numbers that show through it. The dial also contains other valuable heating information including sizes of mains, returns, risers, radiator sizes and capacities, round and sectional boiler net ratings, chimney flue sizes and capacities with minimum and maximum heights, hot water tank sizes and capacities, fuel oil tank sizes and capacities, hot water generator capacities, etc.
Manufacturer: Heat-O-Meter, 424 West 42nd St., New York 18, N. Y.

ONE-PIECE SAFETY FLUE eliminates weak point in chimney construction, withstands 2400° F. temperature.

The Pittsburgh Safety Flue is a single casting which includes a flue entrance, a flue liner, a baffle plate to increase draft and a clean-out opening with closure. It provides a leakproof connection from the furnace flue to the chimney. It is tested to withstand 2400° F. and is approved by Fire Underwriters. The single refractory casting eliminates multiple joints, cracks and patches necessitated by old fashioned chimney construction; thus sparks, flames and fumes are prevented from escaping at joint where the furnace flue enters the chimney. A convenient clean-out opening projects from the wall so containers may be placed under the opening to capture loose soot. A plug type closure, also made of refractory, eliminates hinges and prevents rusting and sticking. The unit, made in standard size 9 in. by 13 in. outside flue dimensions, is designed to receive flue pipe of 7 in., 8 in., 9 in., and 10 in. diameters.
Manufacturer: New Castle Refractories, New Castle, Pa.

SINK FAUCETS styled to harmonize with modern postwar kitchens.

A new line of sink faucets, called Streamluxe, is the result of intensive study of functional and appearance requirements. Included are the "Champion," the "Challenger" and the "Sensation," chrome-plated kitchen deck-type sink fixtures. They are available with or without a plastic spray fixture which has finger-tip control regulating water flow from the head rather than from the faucet. Also included in the line is the Mercury, a new wall type unit. It features an exclusive patented design feature—a soap dish located in the center of the unit below the spout and having functional flutings. The top ribs of the fluting tilt slightly upward to hold the soap, while the recessions dip slightly forward to drain water into the sink.



Manufacturer: Barnes Manufacturing Co., Mansfield, Ohio.

POSTWAR CABINET LINE allows flexibility and easy installation.

General Electric's postwar cabinet line, reduced to one-fifth the size of the prewar line, includes 21 major cabinets plus 16 accessories for wall cabinets and 23 accessories for base cabinets. They feature many improvements making for greater flexibility than with the prewar line. Made of steel, the cabinets are coordinated in design with G. E.'s electrical appliances and have hardware matched with that of the G. E. Range and Refrigerator. They are finished in a two coat, one-bake white plastic paint and feature interchangeable accessories. These include condiment shelves, towel racks, tray storage, cutlery boards, cup hooks, sliding vegetable bins and bread boxes, flour and sugar bins and sliding lid racks. Every accessory used in a drawer cabinet can also be installed in a cupboard *(Continued on page 178)*

Stewart JAIL and PRISON EQUIPMENT

COVERS ALL REQUIREMENTS

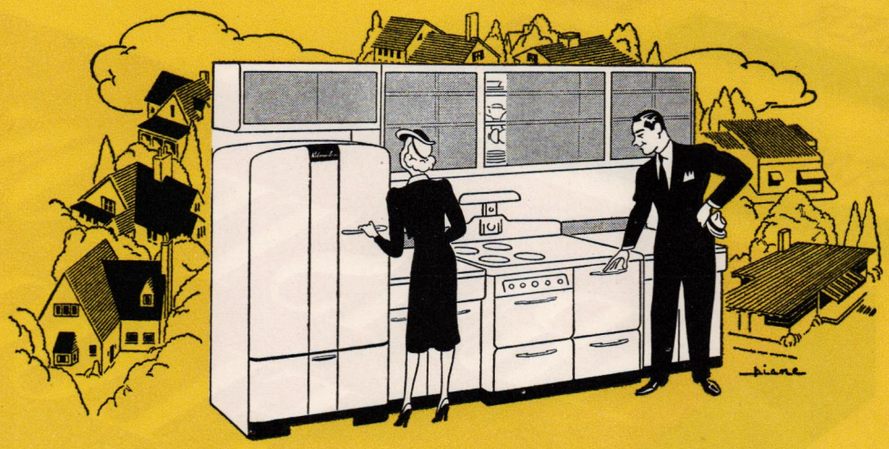
from a village lockup to a federal penitentiary

Grating and Plate Cells; Doors; Lock and Locking Devices; Bunks; Tables; Seats; Iron Stairways, and all modern jail equipment. Our engineering staff will be glad to assist architects in the development of plans for new construction or remodeling, and furnish, without cost or obligation, complete information on any project irrespective of size. ¶ You are cordially invited to avail yourself of the technical facilities offered by the Stewart jail and prison engineering department.

THE STEWART IRON WORKS COMPANY, INCORPORATED

1365 Stewart Block - - Cincinnati, Ohio

Designers and Builders of "Jail and Prison Equipment Since 1886"



Kelvinator's Trouble-Free Performance costs less to own!

One way to offset current high building costs is to select equipment that costs less to own and operate. In kitchen equipment you'll find it profitable to install Kelvinator.

Over 30 years of experience in building refrigeration equipment has given Kelvinator a decided edge in solving the problems of large-scale installations of home refrigerators. Powered by the exclusive Polarsphere unit—sealed in steel and permanently bathed in oil—Kelvinator Refrigerators deliver trouble-free performance, year in, year out!

That's why Kelvinator refrigerators *cost less to own*, for trouble-free performance means greater user satisfaction . . . lower maintenance cost, fewer replacements, long installation life!

For complete information and details on availability, consult your Kelvinator dealer. Find his name in the classified section of your phone book. Or write Kelvinator, Detroit 32, Mich.

VISIT THE "NO. 1" SPOT AT THE BUILDERS' SHOW

See Kelvinator's exhibit of new refrigerators, home freezers, electric ranges and water heaters and kitchen cabinets.

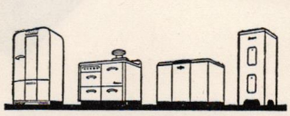
SPACE NO. 1

WHAT PROPERTY MANAGERS SAY

. . . . in letters now in Kelvinator's files:

VANCOUVER, WASHINGTON—"We are happy to say that we have not had one breakdown on any of the 500 Kelvinator refrigerators now in operation."

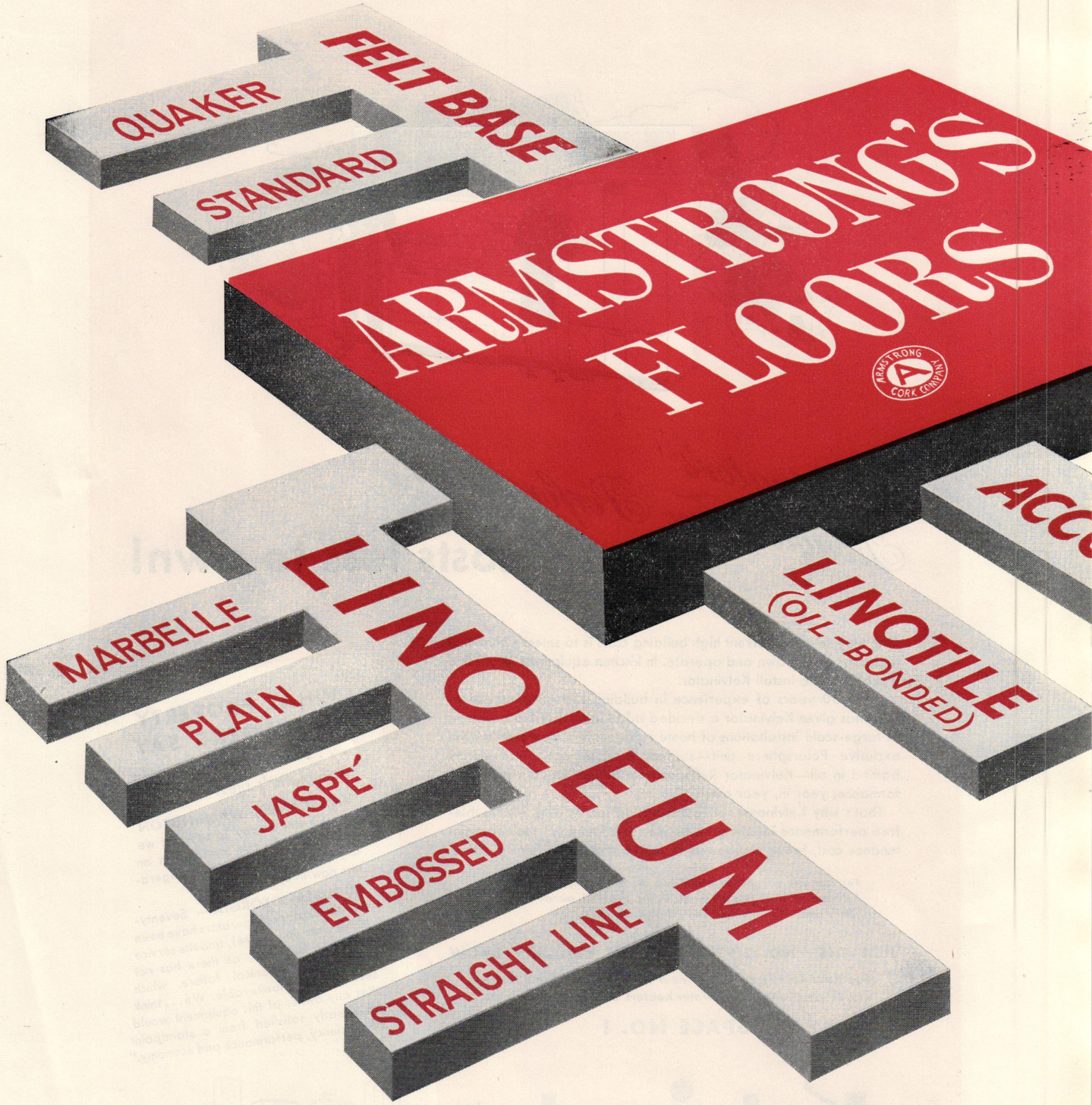
AUGUSTA, GEORGIA—"Seventy-five Kelvinator refrigerators have been in use since July 1, 1941, and the service has been excellent, as there has not been any mechanical failure, which seems almost unbelievable. We . . . think that any owner of this equipment would be greatly satisfied from a standpoint of efficiency, performance and economy."

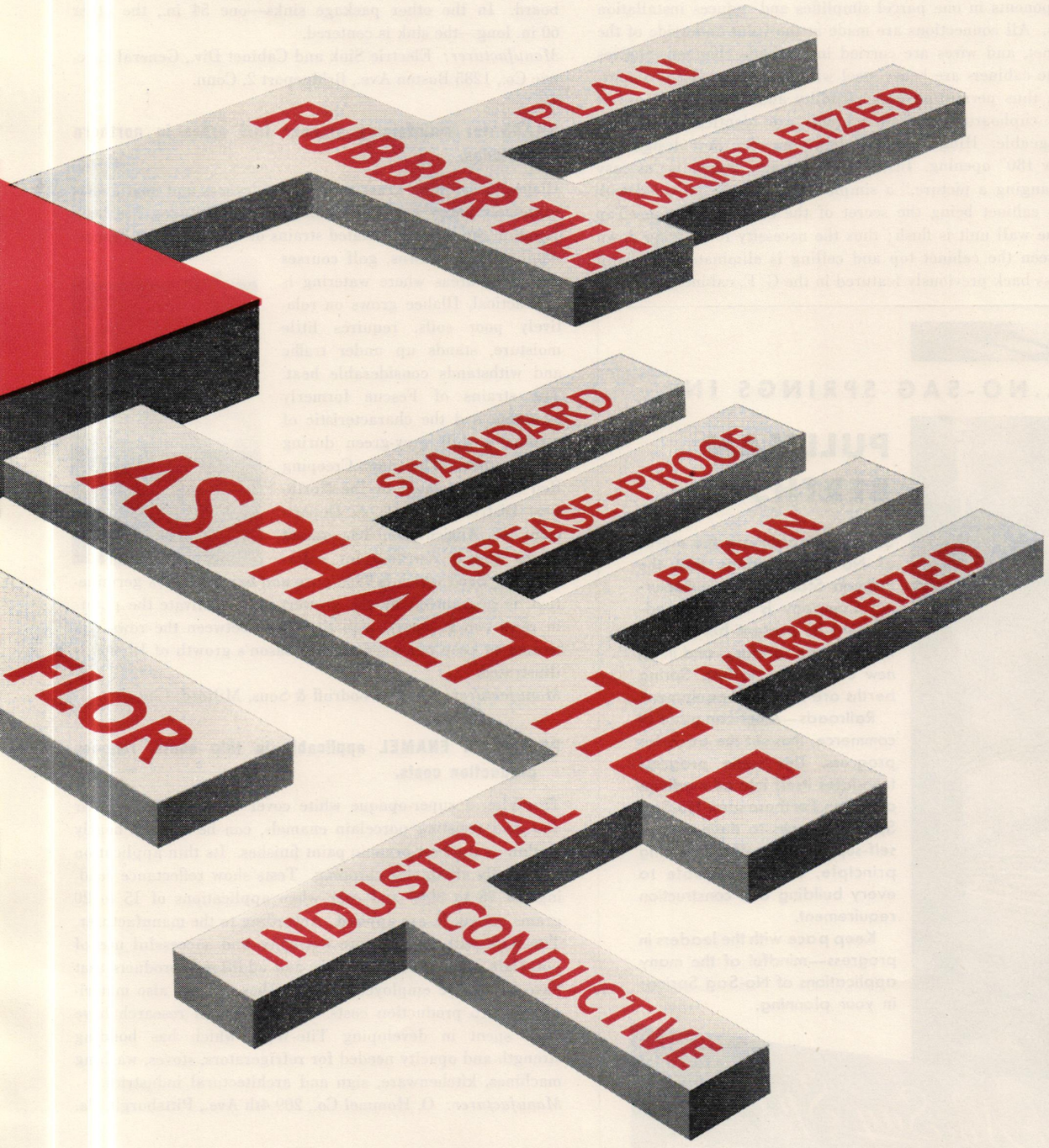


Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT

REFRIGERATORS • ELECTRIC RANGES • HOME FREEZERS • HOT WATER HEATERS


FELT BASE
QUAKER
STANDARD
ARMSTRONG'S FLOORS
ARMSTRONG CORK COMPANY
ACC
LINOTILE (O/L - BONDED)
LINOLEUM
MARBELLE
PLAIN
JASPÉ
EMBOSSED
STRAIGHT LINE

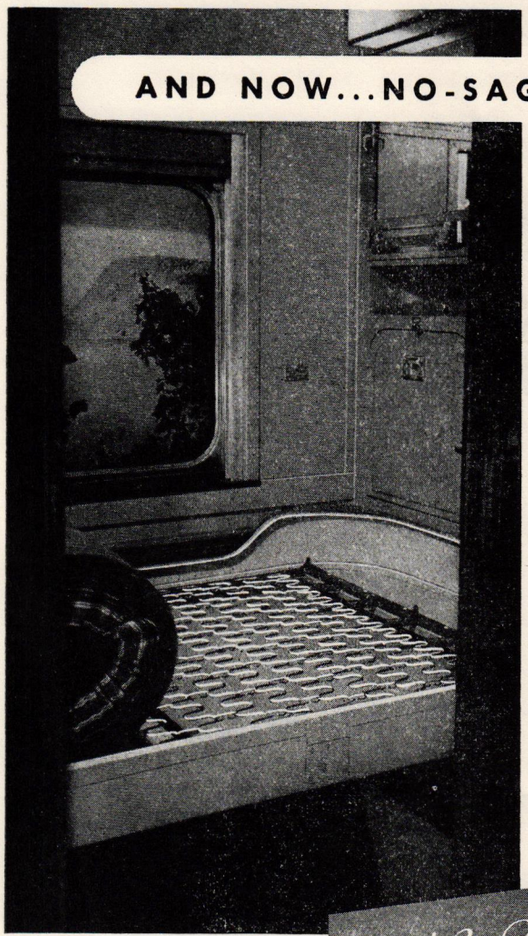


Few people realize how many Armstrong Floors there are—how many different flooring materials we have developed to meet every requirement. Because there are so many Armstrong Floors available, we can often help solve unusual flooring problems, always offer unbiased recommendations.

Armstrong Cork Company, 2302 Duke St., Lancaster, Pa.

cabinet by attaching it to the shelves. As in the past, automatic interior lighting, work surface lighting and a convenience outlet are provided. However, packaging of loose components in one parcel simplifies and reduces installation costs. All connections are made at the front underside of the cabinet, and wires are carried in a simple channel. Shelves of the cabinets are heavy steel wire, pre-adjusted and removable, thus permitting easy visibility and cleaning. Doors of base cupboard and wall cabinets are identical and interchangeable. Hinges on unit doors are of a new design and allow 180° opening. Installation of wall cabinets is "as easy as hanging a picture," a simple metal hanger provided with each cabinet being the secret of the easy installation. Top of the wall unit is flush; thus the necessity for furring down between the cabinet top and ceiling is eliminated. The full recess back previously featured in the G. E. cabinets has been cut down to a partial recess, increasing storage space. Three package sinks are also included in the line. One is 42 in. long and incorporates a sink with either a right or left-hand drain board. In the other package sinks—one 54 in., the other 60 in. long—the sink is centered.

Manufacturer: Electric Sink and Cabinet Div., General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.



AND NOW...NO-SAG SPRINGS IN

PULLMAN BERTHS

So recognizable are the merits of No-Sag* Springs that the Pullman Standard Manufacturing Company is rapidly modernizing its present berths with these unique springs—and in all *new* cars built, No-Sag Spring berths are standard equipment.

Railroads—American giant of commerce, thus set the pace for progress. This same progress translates itself into *all* mediums of design. For these same No-Sag Springs, thanks to their unique, self-supporting, self-conforming principle, are applicable to every building and construction requirement.

Keep pace with the leaders in progress—mindful of the many applications of No-Sag Springs in *your* planning.

Write to Dept. A for "Progress" Booklet describing the numerous applications of these unique springs.

No-Sag Springs

The ONLY Self-Supporting • Self-Conforming Spring

OUR ENGINEERING DEPT. is available for consultation. We will even spring up, free of charge, any sample frame you send us—and return it with complete construction specifications.

*Patented and Pats. Pending

NO-SAG SPRING COMPANY • KAY MANUFACTURING CORP.

Executive Offices: 21590 Hoover Road • Detroit, Michigan

Executive Offices: Foot of Warren Street • Brooklyn, N. Y.

Permanent Display Quarters: American Furniture Mart, Chicago

GRASS for maintaining greener turf areas in northern latitudes.

Illahee, a creeping grass that resists dryness and heat and is extremely hardy particularly in northern latitudes, has been found in the recently isolated strains of Creeping Red Fescue. Applicable for lawns, golf courses and large areas where watering is impractical, Illahee grows on relatively poor soils, requires little moisture, stands up under traffic and withstands considerable heat. The strains of Fescue formerly available had the characteristic of turning a dull grey-green during hot weather. The new Creeping Red Fescue isolated by the Northwest District of the U. S. Department of Agriculture, has round leaves and is certified for color-holding. Seed which is 99% pure and having a 95% germination, is guaranteed by the growers, who cultivate the plants in rows two ft. apart, with the space between the rows cultivated to keep out weeds. One season's growth of Illahee is illustrated.





Manufacturer: F. H. Woodruff & Sons, Milford, Conn.

PORCELAIN ENAMEL applicable in thin coats, reduces production costs.

Tite-Wite, a super-opaque white cover coat in both regular and acid resisting porcelain enamels, can be applied nearly as thin as the best organic paint finishes. Its thin application practically eliminates chipping. Tests show reflectance readings of 75 to 80% and over when applications of 15 to 20 grams per sq. ft. are applied. According to the manufacturer, Tite-Wite will permit more extensive and successful use of porcelain enamel on many new and additional products that have heretofore employed other finishes. It will also materially reduce production costs. Many years of research have been spent in developing Tite-Wite, which has bonding strength and opacity needed for refrigerators, stoves, washing machines, kitchenware, sign and architectural industries.

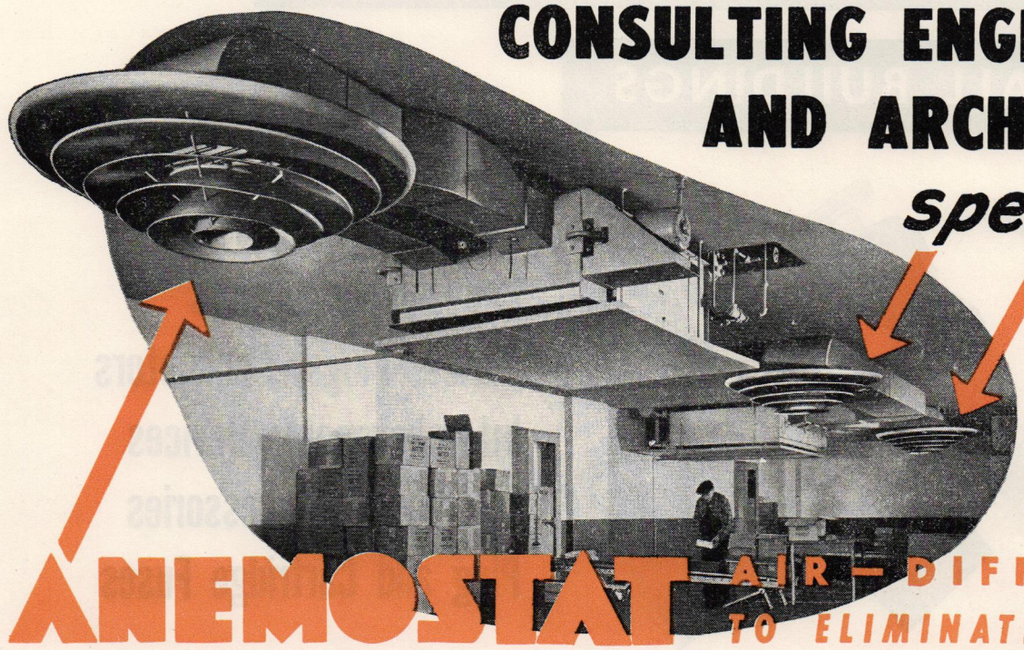
Manufacturer: O. Hommel Co., 209 4th Ave., Pittsburgh, Pa.

MECHANICAL PENCIL designed to eliminate lead breakage.

Bruning No. 3583 Draftsman's Refillable Pencil is constructed on a new principle which is designed to eliminate the annoyance of broken lead. A new type clutch holds the lead firmly in a non-slip rubber grip that prevents the usual nicking and scoring of lead which cause breakage. Lightweight, proper balance, long barrel permitting use of standard length lead, knurled grip, tapered point, and adjustable cap for easy identification of the degree of lead used are other features. Price is $1.00.

Manufacturer: Charles Bruning Co., Inc., 4654 Montrose Ave, Chicago 41, Ill. *(Technical Literature, page 182)*

EMPLOYEES COULDN'T WORK HERE UNTIL CONSULTING ENGINEERS AND ARCHITECTS *specified*



ANEMOSTAT AIR-DIFFUSERS TO ELIMINATE DRAFTS

You're looking at the shipping room of the Bowman Dairy plant at River Forest, Illinois. Originally it was equipped with two ceiling-type unit coolers with the usual horizontal grilles . . .

Blasts of air from the unit coolers were so severe that employees could not endure room temperatures of 50° F!

Hoping that scientific air-diffusion was the answer to employees' complaints, one of their horizontal grilles was replaced with a *draftless* ANEMOSTAT air-diffuser. *That was the solution!* And the owners quickly ordered two more ANEMOSTATS. Today, working conditions are reported as "not only satisfactory, but enjoyable."

HOW ANEMOSTATS COMPLETE AIR-CONDITIONING

Due to its patented design, the ANEMOSTAT distributes air of any duct velocity in a multiplicity of planes traveling in all directions. Simultaneously, the unit creates a series of counter-currents which siphon into the device room-air equal to about 35% of the volume of supply-air. This room-air is mixed with the supply-air within the diffuser before the air-mixture is discharged into the room. The velocity of the discharged air is instantly reduced within the ANEMOSTAT by air expansion.

In this way, the ANEMOSTAT diffuses air of any duct velocity noiselessly and evenly, thoroughly and draftlessly throughout the room . . . closely equalizes temperature and humidity . . . and prevents air stratification.

AC-1043

HOW ANEMOSTATS HELP THE ARCHITECT & CONSULTING ENGINEER

ANEMOSTAT wall or ceiling diffusers permit the use of *higher* velocities and *greater* temperature differentials. As a result, you gain corresponding reductions in duct sizes and number of duct outlets. Substantial savings in installation and operating costs naturally follow. ANEMOSTATS have no moving parts . . . never need attention or replacement . . . never cause call-backs. And remember, *there is no substitute for ANEMOSTAT air-diffusers!*

The next air-conditioned building you're called upon to design may be a theatre, a restaurant, or an industrial plant. Whatever it is, when it comes to specifying ordinary grilles or *ANEMOSTATS . . . think of the Bowman Dairy!* Be prepared for your next air-distribution problem — *write today for complete ANEMOSTAT details.*

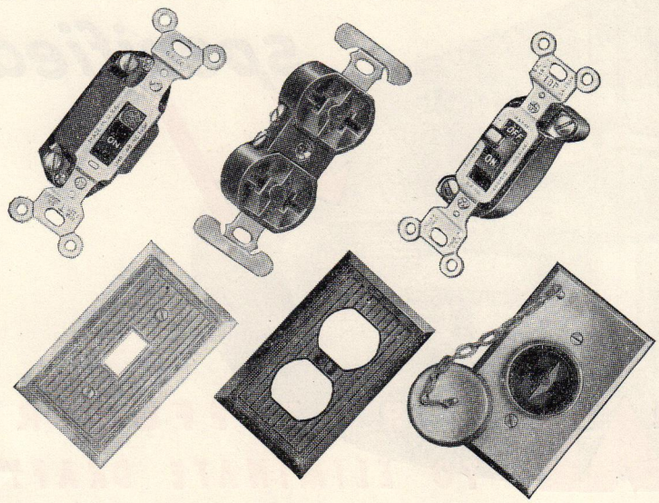
ANEMOSTAT
REG. U. S. PAT. OFF.

ANEMOSTAT CORPORATION OF AMERICA
10 EAST 39th STREET NEW YORK 16, N. Y.

"NO AIR-CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION"

SPECIFY G-E WIRING DEVICES

FOR ALL BUILDINGS

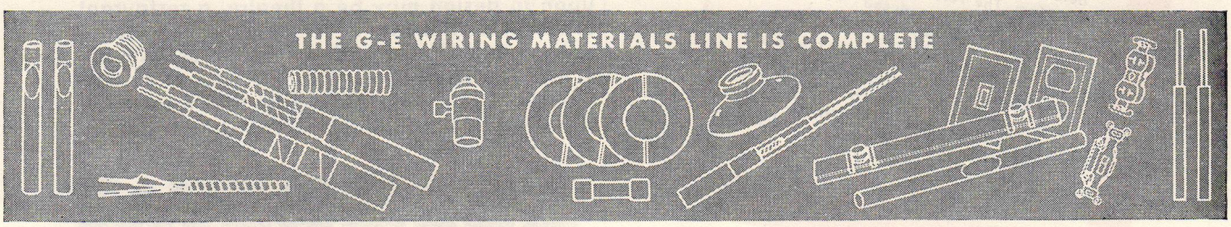


Switches, Lampholders
Convenience Outlets
Plates, Plugs, Connectors
Interchangeable Devices
Fluorescent Accessories
Plug and Cartridge Fuses

Here are electrical wiring devices worthy of the finest buildings you design—wiring devices suitable for office buildings, stores, factories, homes or any other type of building. They are carefully manufactured and have high quality. G-E wiring devices are kept up-to-date. New devices are added constantly to meet changing requirements.

Your clients will like G-E wiring devices. They are well designed and neat looking. Moreover, they will give long, dependable service. Specify these devices for all your building. The G-E Monogram is widely recognized and will bring added prestige

FOR FURTHER INFORMATION see the nearest G-E Merchandise Distributor or write to Section D262-26, Appliance and Merchandise Department, General Electric Co., Bridgeport, Conn.



GENERAL ELECTRIC

BUILD WITH

STRAN STEEL

A FIRE-SAFE, SIMPLIFIED FRAMING SYSTEM FOR HOUSING PROJECTS AND APARTMENT BUILDINGS

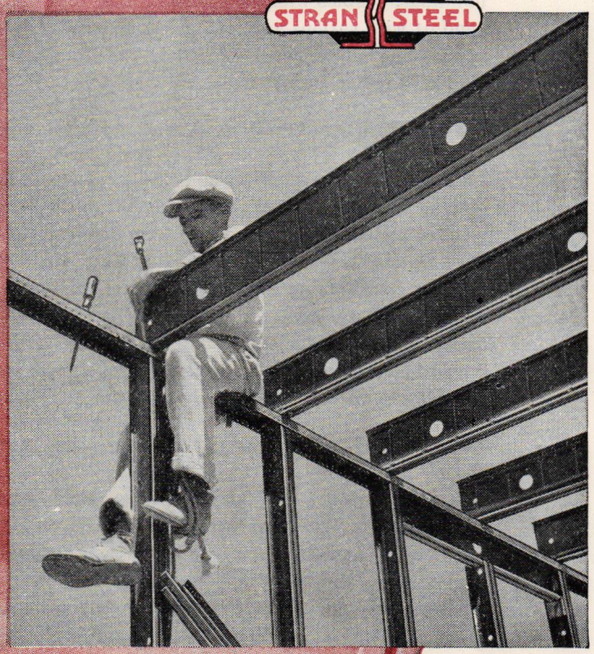
Particularly adapted to multiple dwelling projects, Stran-Steel framing systems speed erection and safeguard the building investment.

All Stran-Steel framing members . . . joists, channel plates and studs . . . are pre-fabricated to exact lengths for rapid assembly on the site. Fastenings and connections are accomplished with ordinary carpenter's tools, and collateral materials are nailed directly to the Stran-Steel studs and joists by means of the Stran-Steel patented nailing groove.

In addition to economy of erection, Stran-Steel construction effects continuous savings in maintenance and upkeep. It is fire-safe and permanent—sag-proof, warp-proof, termite-proof. Its strength and uniformity insure lasting value.

Stran-Steel is the *modern* building material. Build with Stran-Steel.

YOU NAIL TO STRAN STEEL

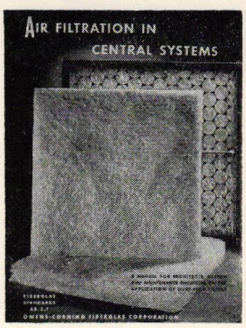


GREAT LAKES STEEL CORPORATION

STRAN-STEEL DIVISION • PENOBSCOT BUILDING, DETROIT 26, MICHIGAN

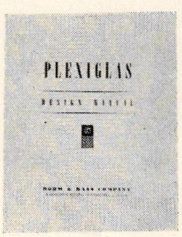
UNIT OF NATIONAL STEEL CORPORATION

TECHNICAL LITERATURE



DESIGN LOADS. Minimum Design Loads in Buildings and Other Structures, (A58. 1-1945) American Standards Association, 70 East 45th St., New York 17, N. Y. 26 pp., 7¾ in. by 10⅝ in. $.50 cents.

This study provides designers with data on the loads a building can carry with safety. It helps answer such questions as how strong floors and walls should be in factories, office buildings and theaters to prevent their collapse when occupied by machinery or enthusiastic audiences, strength necessary to resist wind pressures, earthquake shocks or loads of winter snow. Main sections discuss dead loads, live loads, soil and hydrostatic pressures, wind and earthquake loads. An appendix is included which is not an integral part of the standard, but contains explanatory and supplementary material to assist local building code committees and building officials in applying the recommended code. Tables illustrate minimum design dead loads, uniformly distributed live loads and design loads for materials. Figures show snow loads, velocity pressures and destructive intensity of earthquakes throughout the country.



INSULATION. Kimsul Insulation Saves Man-Hours and Man-Power on Every Job, 24 pp., 8½ in. by 11 in.

Latest edition of the Kimsul Insulation book for architects and builders, this booklet contains information on the physical characteristics of Kimsul and its proper application in various sections to both new and existing structures. Covered are such questions as how to choose the right thickness, why and how to ventilate the attic, when a vapor seal should be used and how to install it, and Kimsul's application to prefabricated buildings. Tables illustrate reduced fuel bills and increased comfort with various applications of Kimsul. Typical specifications and efficiency of Kimsul in "U" factors are also included. Kimberly-Clark Corp., Neenah, Wis.

INSULATION. Air Filtration in Central System, 24 pp., 8½ in. by 11 in.

This manual for architects and design and maintenance engineers presents product characteristics, test data and recommended methods of application and maintenance of Fiberglas Dust-Stop Filters as applied to central heating, ventilating and air conditioning systems. Description, types and sizes, operation, dimensions, ratings and tolerances are included. Charts illustrate efficiencies and resistances of the different types of filters. Installation design is covered with photographs and details. Owens-Corning Fiberglas Corp., Toledo, Ohio.

METAL TRIM. B & T Metal Trims, Chromedge, 30 pp., 3¼ in. by 6 in.

New handy pocket size catalog features the Chromedge line now available. Although only a small part of the complete line, it offers possibilities for variety in floor and wall covering applications. Illustrated and described are nosings, edgings, bindings, cap trims, corner coves, cove base trims, color inset trims, wood coves, wallboard trims, sink-well frames, preformed stair treads and special preformed bends. Supplementary price data gives up to the minute price changes. B & T Metals Co., 425 W. Town St., Columbus 16, Ohio.

PLASTICS. Plexiglas Design Manual, 56 pp., 5½ in. by 8 in.

This comprehensive manual offers valuable information on design methods for acrylic plastics, pointing out possibilities and outlining limitations of design in transparent plastics. It is one of a series of technical booklets covering optical and mechanical properties, fabrication and installation of Plexiglas. It is intended to assist the designer to take full advantage of Plexiglas' properties. Contents are divided into four sections: Optical Considerations, Light Control and Piping, Fabricating Considerations and Molded Parts. Many illustrations, including photographs, details, and diagrams and tables of optical, mechanical, chemical, electrical and thermal data, clarify the text. Rohm & Haas Co., Washington Sq., Philadelphia 5, Pa.

PLASTICS. Plastics Instructions for Machining, Plastics Publishing Co., P. O. Box 968, Rochester, N. Y. 40 pp., 4 in. by 6 in. $.60 cents.

Information on various machining operations for Formica, Tenite, Micareta, Marblette, Phenolite, Plexiglas, Catalin, Taylor Laminated Plastic, Lucite and Plastacele are contained in this manual. Machining of each plastic has its own specialized requirements so the practices offered have been affirmed by the plastic manufacturer. A few of the subjects discussed in relation to the materials are polishing and surfacing, punching, sawing, drilling, threading, tapping, cementing, milling, sanding, stamping and embossing.

REQUESTS FOR INFORMATION

JAK ATIAS, importer and agent, Menase Han No. 63, Tahtakale, Istanbul, Turkey would like information on portable houses, materials for construction, furniture, heating and cooling equipment and electrical appliances.

ALFONSO BENAVIDES, 44 Boylston St., Cambridge 38, Mass., desires catalogs on equipment for a small machine shop—small drop forge, heat treatment and welding equipment, drills, lathes, grinders, shapers, mills, etc.

OFFICE OF MCCLURG & HESSE, architects, 634 North Central Ave., Glendale 3, Calif., would like to receive bulletins, announcements, articles, etc. of interest to the architectural profession and building trades.

JAMES R. PARK, 4114 N. Henderson Rd., Arlington, Va., desires information on modern home construction.

ERNEST ROSE, architect, 181 Church Street, Pietermaritzburg, Union of South Africa, would like to receive literature on doors and windows for large houses and motor showrooms.

LUDWIG SCHORR, architect, 20A, Redack St., Jerusalem, Palestine, would like to receive information and literature on all products connected with the building industry for export, particularly kitchen and laundry equipment and appliances.

THE YORK MILL CO., LTD., Rishton Blackburn, England, would like to contact American buyers of tracing cloth and typewriter ribbon cloths.

REQUESTS FOR LITERATURE

K. C. BELLOWS, 10 South Linden Ave., Sheridan Wyo.
THOMAS A. CARY, architect, 142 Belvoir St., Alexandria, Va.
HAROLD H. FISHER, architect, 1605 Industrial Bank Bldg., Detroit 26, Mich.
B. X. FORESTER, architect, 139 North Clark St., Chicago 2, Ill.
HAROLD H. HOGUE, architectural designer, 40 W. Congress St., Tucson, Ariz.
RAMON CUE JANE, architectural student, Hotel Residencial, Jesus Peregrino #508, Havana, Cuba.
GEORGE C. KIBBE, 7 So. Kilburn Road, Garden City, N. Y.
DON E. KNOBLAUCH, designer and builder, 2255 No. 66th St., Milwaukee, Wis.
LOUIS & HENRY, architects, 1271 Starks Bldg., Louisville 2, Ky.
A. GORDON LUMM & ASSOCIATES, architects, 406 Rust Bldg., Tacoma 2, Wash.
ELLIOTT PINCUS, 68 Montague St., Brooklyn 2, N. Y.
ARCHITECTURAL SOCIETY, PRATT INSTITUTE, Brooklyn 1, N. Y.
ENSIGN F. W. SHOEMAKER, S O Q -S, U.S. Naval Hospital, Chelsea, Mass.
CAPT. WILLIAM J. WATTS, RE, 14 Grovenor Terrace, Glasgow W 2, Scotland.
WENGER and LAUCK, architects, 212 South Main St., Harrisonburg, Va.
IDA WONG, student, 137 East 30th St., Los Angeles, Calif.

Modern Hospitals

Fore-stall Piping Trouble

WITH SILBRAZ* JOINTS



1. Jersey City Medical Center, Jersey City, N. J.
2. Bellevue Hospital, New York, N. Y.
3. Kern County General Hospital, Bakersfield, Calif.

IN large, modern hospitals Silbraz joints made with Walseal* products are the natural choice of both architect and builder.

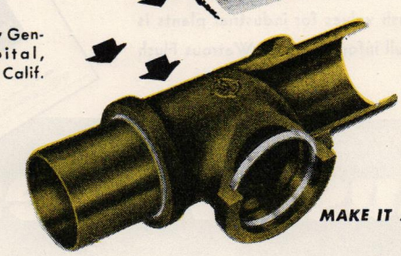
Why? The answer is simple:

1. Silbraz Joints make leakproof, trouble-free connections that are permanent . . . vibration-proof, corrosion-resistant — connections that will not creep or pull apart; that literally join with the pipe to form a "one-piece pipe line".
2. They eliminate the need for maintenance and costly repairs — especially important where piping failure might seriously impair the operation of the hospital.

So, when your plans calls for "B" Copper tubing" or brass pipe for hot and cold water circulating lines; boiler feed lines; oxygen and carbon dioxide lines in oxo-therapy wards; control and circulating piping in thermo bath wards — include in the specifications Silbraz joints made with Walseal valves, fittings and flanges.

For complete details on Walseal products, write for a free copy of Walworth Catalog 84.

*Patented — Reg. U. S. Pat. Off.



MAKE IT A "ONE-PIECE LINE" WITH WALSEAL

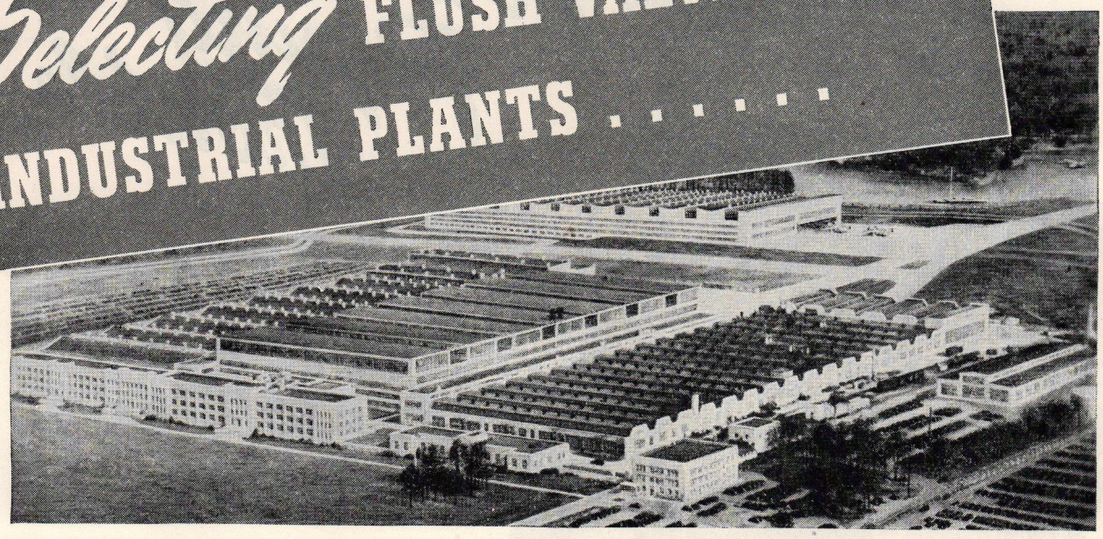
Walworth

VALVES AND FITTINGS

60 EAST 42nd STREET, NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

Selecting FLUSH VALVES FOR INDUSTRIAL PLANTS . . . . . .



Several interesting trends in flush valve applications for industrial plants are disclosed by a recent survey among architects widely experienced in industrial plant design.

For example, while hand-operated flush valves continue to have top preference for closet bowls and urinals, there is a growing trend toward the use of foot-operated flush valves for both of these applications. This trend and others are discussed in the booklet offered below.

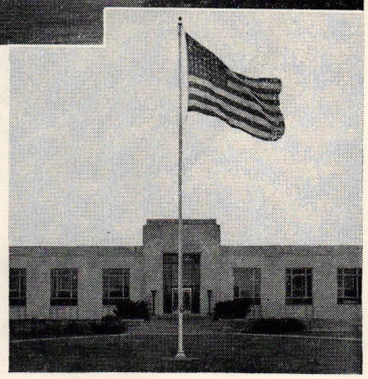
Of course, a primary consideration in the selection of any flush valve combination is dependable, trouble-free performance, characteristic of all Watrous Flush Valves.

Very important also is economy—here the simple Watrous Water-Saver adjustment makes possible savings of many thousands of gallons of water each year.

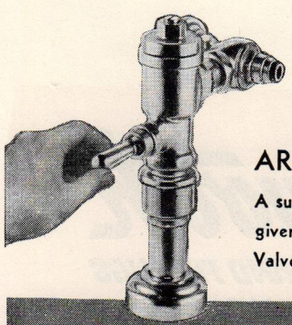
Maintenance is another factor. This has been simplified by the convenient, single-step servicing feature of Watrous Flush Valves.

Combine all these qualities in the flush valves for your new plant or modernization programs by specifying Watrous Flush Valves—a selection that will be a constant source of satisfaction over the years to come.





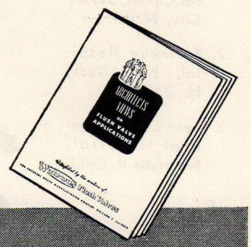
The Glenn L. Martin Company, Middle River, Maryland, is Watrous-equipped throughout. Architect: Albert Kahn Associated Architects & Engineers. Plumbing Contractor: Lloyd E. Mitchell, Inc. Top: Aerial view of plant. Middle: Engineering Building. Right: Administration Building.



THE IMPERIAL BRASS MANUFACTURING COMPANY
1238 W. Harrison St., Chicago 7, Ill.

ARCHITECTS' VIEWS ON FLUSH VALVE APPLICATIONS

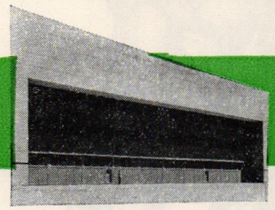
A survey of interesting trends in the selection of flush valves for industrial plants is given in Bulletin No. 477. Write for your copy. For full information on Watrous Flush Valves ask for Catalog No. 448-A.



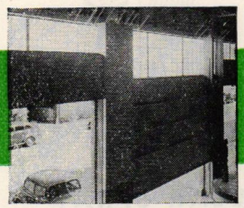
Watrous Flush Valves

When you need a door that..

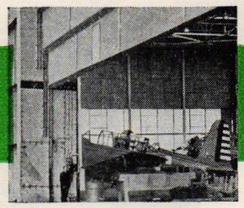
Is unlimited in height and width, in surface materials, fenestration or number of sliding pilot doors—



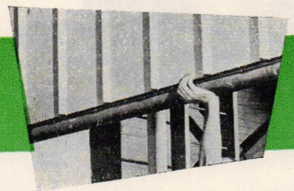
Nests directly above the door opening, permitting overhead equipment to be built right out to the opening—



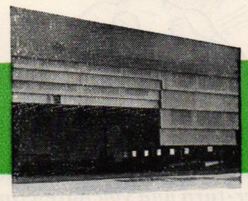
Can be operated electrically or manually, raising all sections to the peak at the same time or stopping them at any point to save heat—



Has a safety device available to halt descent of door if it touches an object, also heat and sound insulation available—



May be divided into independent doors



Leaving opening unobstructed and lowest section can be made to conform to ground slope—



Robertson Vertical Lift Door

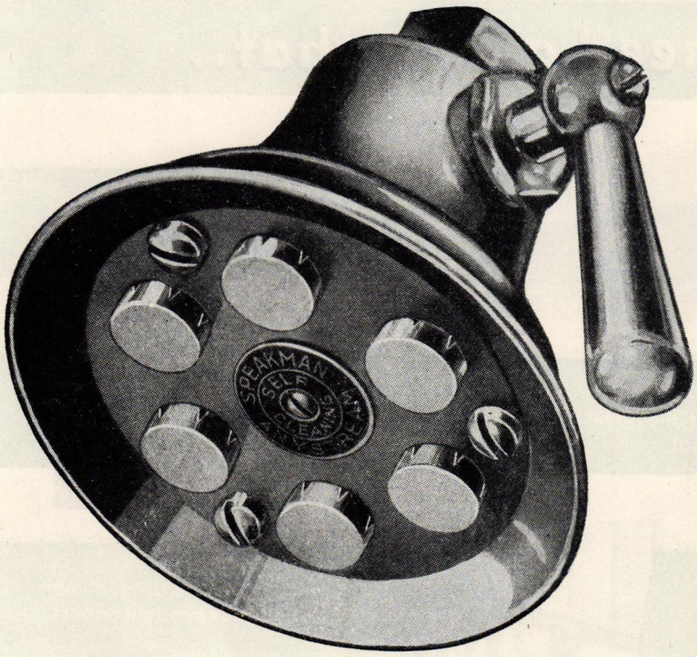
The Vertical Lift Door does away with the grief which usually makes big doors a problem. The Vertical Lift sections nest directly above the door opening, out of the way, leaving ceiling, floor and wall space completely unobstructed. Ground rise from frost, or roof sag from snow will not jam the Robertson Doors. Nor can snow or sand drift block them. Robertson has worked out the engineering principles. The details can be harmonized with your architectural design. Robertson will be glad to work with you or your engineers.

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A condensed catalog of Speakman Showers and Fixtures is listed in Sweet's Architectural File.

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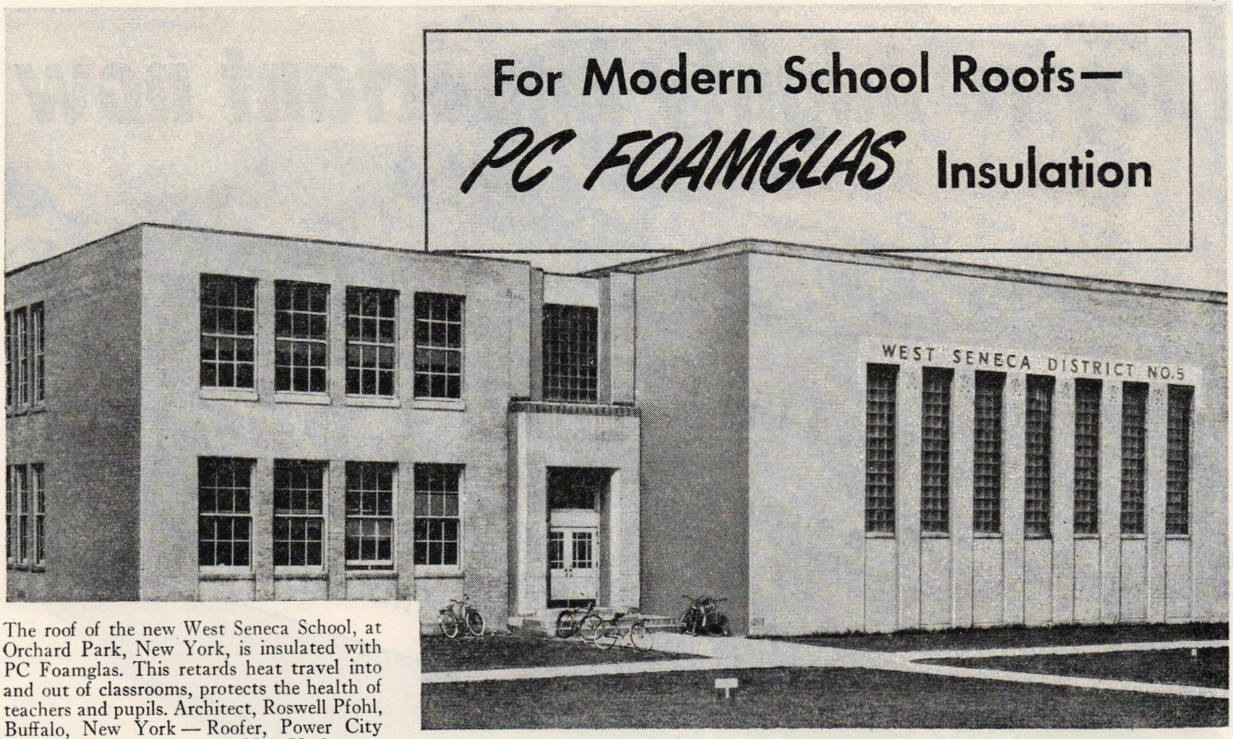
3 FLOOD SPRAY

Another quarter-turn and you get a no-splash rinse.

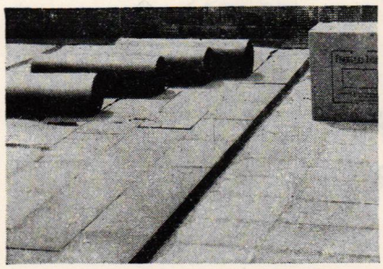


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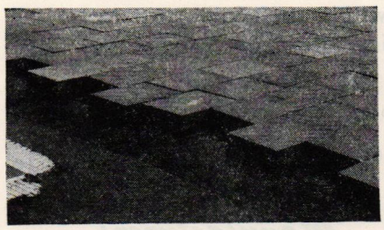
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The roof of the new West Seneca School, at Orchard Park, New York, is insulated with PC Foamglas. This retards heat travel into and out of classrooms, protects the health of teachers and pupils. Architect, Roswell Pfohl, Buffalo, New York — Roofer, Power City Roofing Company, Buffalo, New York.



This picture shows how PC Foamglas Insulation is applied and how roofing is built up. Concrete slabs are covered with hot pitch or asphalt. Then, in turn, PC Foamglas, pitch or asphalt, four plies of roofing felt, pitch or asphalt and gravel are applied. All sorts of flat deck roofs, on all sorts of buildings all over the country, have been insulated—for good—with PC Foamglas.



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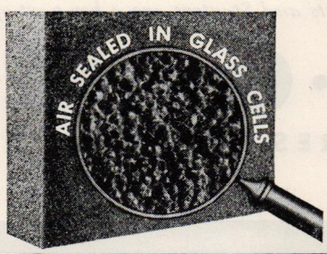
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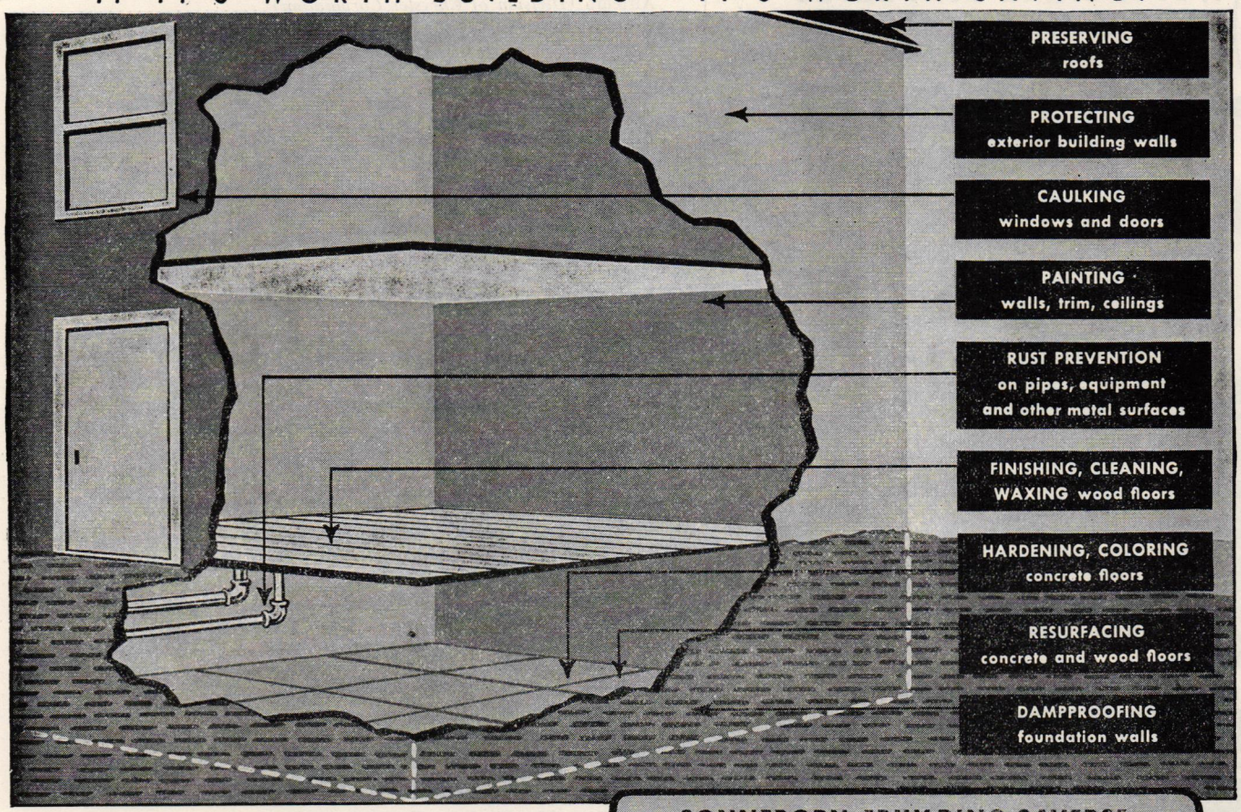
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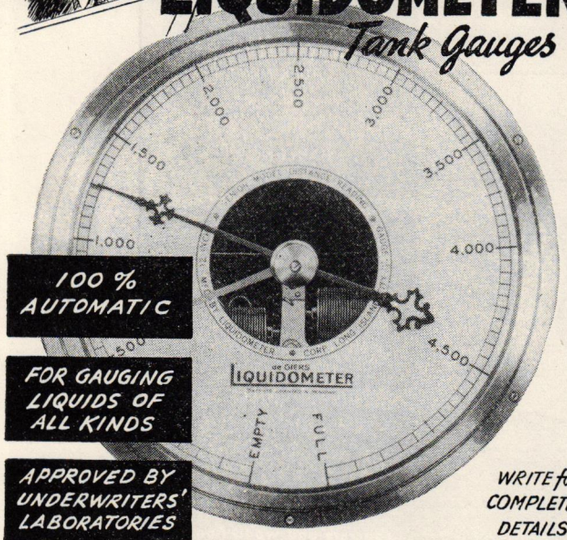
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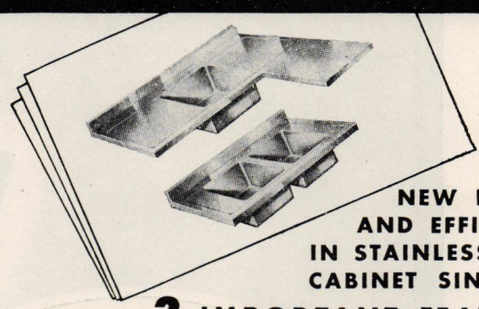
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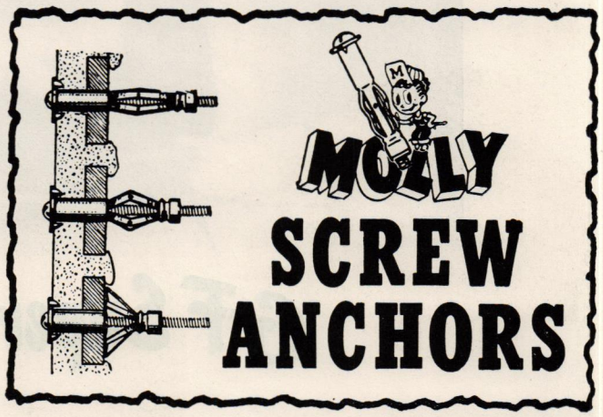
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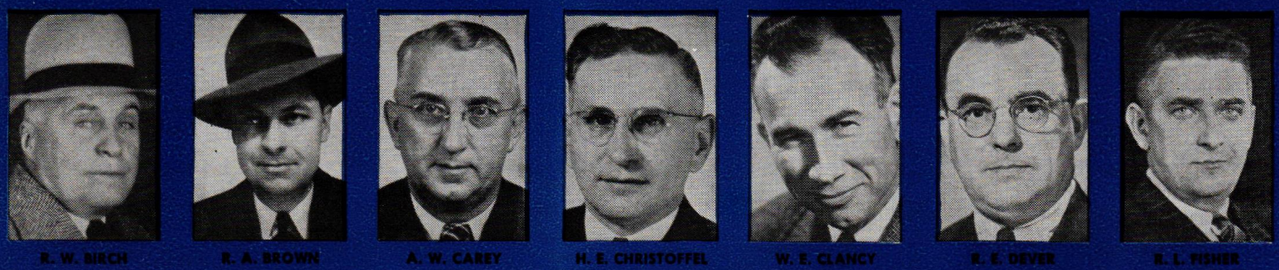


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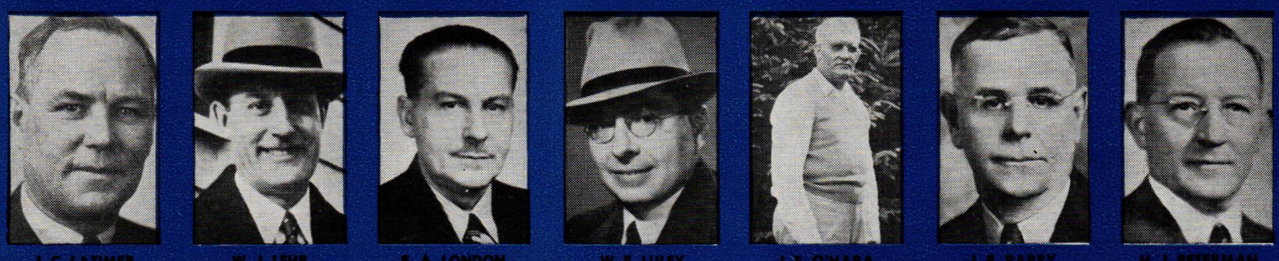
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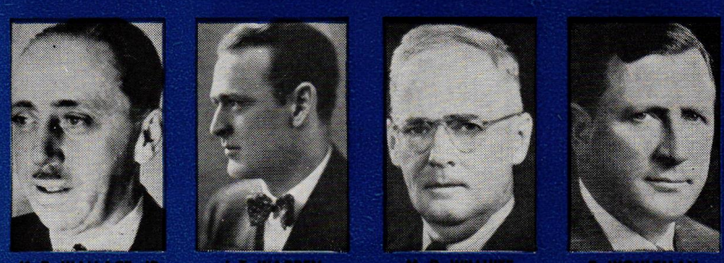
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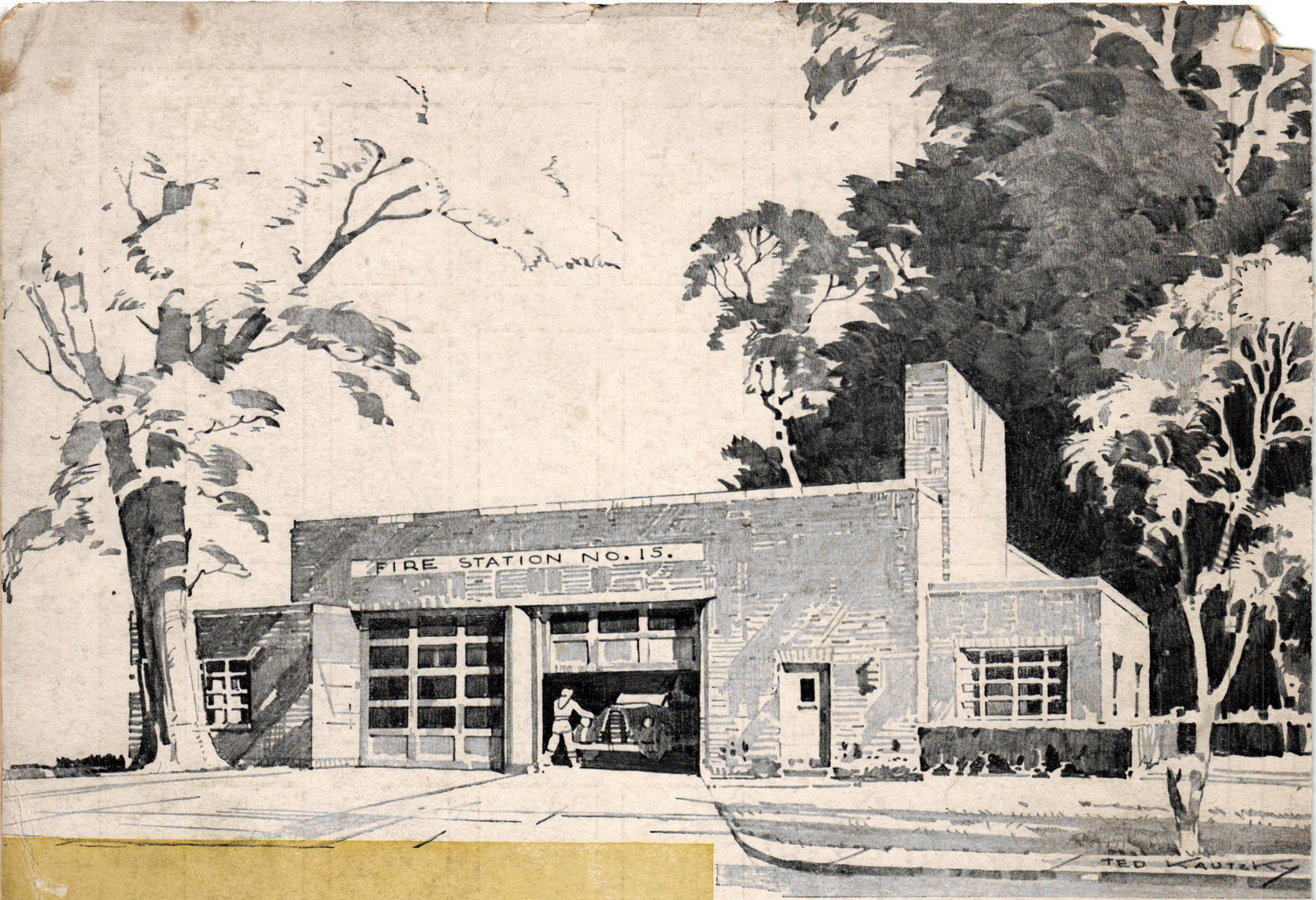
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